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CLINICAL LECTURE
ON A CASE OF
POISONING BY LAUDANUM,
DELIVERED AT
CHARING-CROSS HOSPITAL,
BY
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Symptoms of poisoning by opium. History of the case. Difficulties of diagnosis in some cases of poisoning by opium. Similarity of drunkenness to opium-poisoning. Points of difference between the two states. Difference in the degrees of rapidity of the effects of spirits and of wine on the system. Indications from the pulse, skin, stomach, bowels, and kidneys. State of the iris. Result of cases detailed by Dr. Ogston. Condition of the respiration. Diagnosis to be formed from the grouping of the symptoms presented to us. Treatment pursued.

GENTLEMEN, I shall direct your attention to-day to a case of poisoning by laudanum.

J. G., a young man of about 23 years of age, of strong muscular form, dark complexion, and healthy appearance, was admitted under my care on the 3rd of August. He was found sitting on a step at the door of a house in a street near Soho-square, about a quarter after ten o'clock at night, in a state of insensibility, and was brought to the hospital by policemen. He was perfectly insensible, and no information could be obtained from him, neither was any one with him when he took the poison; nor did any one accompany him to the hospital that knew more of the matter, or of his history, than that he was found insensible on a step, as I have stated: from the symptoms under which he laboured, however, it was considered that he had taken an opiate—a supposition which was afterwards confirmed by the finding bottles upon him which had contained some.

Mr. Brown, in his report of the case to me, states that the patient, upon being brought in, was in a state of insensibility amounting to coma, but without stertorous breathing; the pulse 90, not strong; the eyes closed, the pupil contracted almost to a point, the tunica conjunctiva replete with red vessels: he appeared not to have vomited. Mr. Brown immediately used the stomach-pump, and then administered an emetic of tartarised antimony, which acted well: some fruit was brought up with the fluid from the stomach. He had also aperient medicines, castor-oil and croton oil: was walked about during four or five hours to prevent his sleeping, to which the tendency was very strong. He both dropped suddenly into sleep, and could be as suddenly aroused from it; a peculiarity generally observed in persons under the influence of opium, unless, indeed, they are in an absolute state of coma: it is the suddenness of the transition that constitutes the peculiarity. After having been walked about nearly five hours, he was permitted to have short intervals of sleep: he was closely watched however; for although there was every reason to consider that the stomach had been entirely evacuated, the narcotic principles of the opium had been taken into the system, and might still produce their deadly effects. A young woman in this hospital, some time since, who had taken solid opium, had spectral illusions up to the fourth day, and continued to be under the peculiar influence of opium so late as the fifth day after her admission.

On August the 4th, the second day, on visiting our present patient, I found him quite capable of conversation, and in the possession of his mental faculties; countenance flushed; eyes still suffused; the eyelids red at the margins; vessels of the conjunctiva full of red blood—had not been weeping to occasion this; the pupils much contracted, although he lay with his back to the light; pulse 96, full, soft; skin, natural temperature; tongue loaded with a white fur, and on the back part of it there was, as if upon the white, a brown coating covered with tenacious mucus. These appearances, however, I do not attribute wholly to the laudanum; he had for some time been yielding to irregular habits, and had brought himself into a nervous, excited

state. Had not had any alvine evacuation since taking the poison, notwithstanding the purgative medicines; he used to be regular in this particular daily. Has severe headach, fluctuating, however, in degree; is not used to have headach; sleeps occasionally, but the sleep is very much disturbed; did not feel refreshed on waking; has no appetite for food.

On the 5th, or third day, the countenance was improved; suffusion of eyes absent; pupil still contracted, though looking from the light; tongue still with a white coating, surmounted by brown, both something diminished since yesterday; less humid; pulse 72, soft and regular; skin natural. The bowels have acted freely three times. The quantity of water passed had been small, from two o'clock yesterday until seven this morning (seventeen hours) had neither passed any nor seemed to require to do so; is not certain whether any passed while in the water-closet; is certain he has not passed any since nine o'clock this morning, six hours and a half—he used not to have such long intervals; the headach has nearly left; his sleep is more refreshing, although still disturbed by dreams, fancies he is falling from a precipice; has now no feeling while awake of having taken an opiate, feels quite himself; appetite returned; spirits not depressed. You are aware that depression of spirits almost constantly follows the use of opiates in opium-takers after the first effects are gone off; usually, also, when it has been taken in an over-dose by persons not in the habit of using it, depression of spirits is a consequence. The unusual cheerfulness evinced by our patient induced me to inquire the wherefore, and I found that this variety in the phenomena of opium-poisoning had been brought about by an agent not hitherto enumerated in the materia medica—a letter from one of the fair sex. This young man, who is well educated and of respectable family, informed me that his circumstances had been much reduced in consequence of his acquaintance with the lady in question; and it appears that a few days since he laboured under an impression that he was deserted by her, and was thus driven to seek refuge in another world, but a letter expressing regret for what he had done, and a hope that he would recover, dispelled his despair, and filled him with lively expectation that all was not yet lost in this; he himself attributed his better spirits to his better prospects: at this visit I left him altogether improved. Ordered mutton diet, and moderate aperients only.

6th, fourth day. Upon going to the ward to-day, to ascertain his state, I found that he had taken his departure.

It appears that the quantity taken was ninepenny-worth, which might be estimated at rather more than an ounce, which he procured in small quantities, at different shops: this he took in portions at short intervals. The time which elapsed between the first and the last portion could not exceed an hour and three-quarters. He states that he began taking it at about half-past eight o'clock, and he was under treatment in the hospital by half-past ten o'clock. At the time of taking it he was so far under the influence of liquor as to be a little confused, but still he recollects procuring it, and other incidents prior to the occurrence of stupefaction.

It is worthy of remark, in connection with the phenomena of memory, that the last impression, prior to his becoming insensible, of which he had any recollection, was the first to recur to him when sensibility returned. He remembered that when the stupefaction was coming over him he sat down upon a step at a street-door, and that he was so overpowered by drowsiness as not to be able to resist it. On the return of consciousness he had the impression that he was sitting on the step still, and could not divest himself of that impression until he had looked about, examined the things around him, reflected, and discovered that he was in bed. This was about twelve hours after his admission. In the interim he had undergone the process of introducing and using the stomach-pump, had been under the active influence of an emetic, and had been during several hours constantly walking about—sometimes even in a state of apparent wakefulness; yet nothing that occurred during the whole time made any strong impression on his memory.

The diagnosis in cases of poisoning by opiates is not without its difficulties; yet we are sometimes obliged to form our judgment in cases where there are no collateral and adventitious circumstances, as phials, or papers, or pill-boxes, to give us assistance, nor persons who are acquainted with what has been done, to give us information. A condition closely resembling narcotism from opium is drunkenness. A drunken man, and a man under the influence of opium, present, in their general aspect, appearances of great similarity; the phenomena in the detail, however, present points of dissimilarity which in most instances, if properly scrutinised, will distinguish them from each other.

We are not able to draw any safe inference from the length of time that may have elapsed between the known, or the supposed moment of taking the poison, and its effects, for both are sometimes, indeed often, very quick in their operation. A little boy, some time since, who had got at a gin-bottle, and taken freely of its contents, was a patient under my care in this hospital, and within five minutes after taking a quantity of spirit he was found insensible, by the side of a chair, on which he had climbed to obtain it.

A case was recorded some time since in THE LANCET, of a boy, about four years old,

who was accidentally left in a room where there had been a convivial party: he had already been permitted to take more wine than was proper for him at dinner, but finding himself in possession of a punch-bowl, into which some wine and rum, amounting in all to about two ounces, had been left, drank the whole contents, and fell almost immediately on the floor, where he remained, and was found insensible, after the lapse of two hours.* It is well known, indeed, that the effects of spirit will sometimes be extremely rapid; and so it is with opium, particularly when taken in a liquid form: hence no satisfactory inference can be drawn from the time which may have elapsed after the poison has been taken.

An interesting example is recorded by Dr. Christison, of two persons taking spirits under circumstances altogether similar, but with very different results, as it regards the time of their being affected by the drink. Two brothers drank in half an hour three bottles of porter and twenty-four ounces (about a pint and a half) of whiskey. One staggered about for an hour before he became insensible; the other, in fifteen minutes after the last bottle, fell down insensible, and had no recollection of what happened for twelve hours. And there are similar facts as regards opium, that is to say, the time which elapses before symptoms are manifested varies. When taken in a liquid form, and on an empty stomach, its action is usually quick; and deep sopor may be produced in a quarter of an hour. Under any circumstances, however, where the dose is such as to be a poisonous one, the specific effects generally follow within an hour.

In both cases there may be sickness, and in each the odour of the matters thrown up may reveal the secret we desire to know; but it is also the case, that sickness is an occasional occurrence only, not a constant one, in either instance; and that whether the poison has been spirit, or an opiate, the matters ejected from the stomach may be entirely without smell. That all trace of laudanum, or indeed of any opiate, and even of solid opium, passes away from the stomach in an extremely short time, is a fact, the recollection of which is of great importance in connection with post-mortem examinations, where there are suspicions of opium being the cause of death.

The pulse fails to afford any indication worthy of much reliance. Under the effect of spirit it generally varies according to the degree of drunkenness; it may be full, hard, and accelerated, where the effects of the spirit are not otherwise very powerful; but in proportion as they are more severe, the pulse most frequently becomes quick, small, and almost imperceptible: so also where opiates are the deleterious agents, the pulse varies with the degree of prostration of the vital powers. It preserves, however, rather greater uniformity under the influence of opiates than under that of spirit, and will often be found soft, full, and regular, as in health, and about the number natural to the age of the patient: while we find almost every variety of pulse under drunkenness, even in the same stage, according to the results of twenty-six cases of this form of poisoning, collected by Dr. Ogston, of Aberdeen. From the experience of the police-office there, it appears that when the stage of stupor is fully formed (yet while the patient is capable of being roused) the pulse is sometimes imperceptible, or very feeble; sometimes distinct, or even full; generally slow, or natural; seldom frequent, very seldom firm.

The state of the skin, too, is very similar in both cases, and varies excessively, according to the constitution of the patient, the quantity taken, and the specific influence of the poison upon the nervous or upon the vascular system. Both alcohol and opium will sometimes produce a dry and hot surface, in others a cold and clammy perspiration.

With regard to the effect of alcohol and of opiates on the stomach and bowels, there is much more opportunity of distinguishing the one from the other: vomiting and action of the bowels are quite common, as the effect of excessive potations of fermented liquors; sickness is less frequently the result of opiates; opiates, indeed, are so likely to make the stomach inactive, that to induce vomiting often becomes a difficulty: it is on account of this difficulty that the use of cupri sulphas is not recommended where opium is the poison, lest failing to produce sickness it should be retained in some part of the stomach or bowels, and act as an injurious irritant. It is, moreover, the difficulty of producing vomiting that makes the stomach-pump so invaluable an instrument for the removal of opiate poisons. The bowels also become inactive under the influence of opiates. The patient at present under attention has been an example of this; he had repeated doses of aperient medicine, including croton oil, before they could be brought to act, and this did not occur until about thirty hours after taking the laudanum. I think you will perceive, in the course of your future practice, that vomiting and a relaxed state of the bowels, occurring at a period early after taking a suspected potion, will be found rather to indicate that the exciting cause is spirit than that it is opium.

Opiates have an effect upon the kidneys different from that produced in most instances by spirit. Opiates, the effects of which are chiefly exerted on the nervous system, produce an extremely diminished secretion; it is passed not frequently, nor in large quantities; and generally the diminution is greater on the second and third days than on the

* Lancet, 1838-9, vol. ii., p. 314.

first: yet this might vary according to the early treatment. Where large quantities of diluents have been given, diminution in the quantity may not be perceived.

A young woman under my care in this hospital some time since (and whose case was a very dangerous one, owing to her having taken large quantities of solid opium), during the first thirty-six hours did not experience any diminution, but after that she had almost entire suppression: small quantities only were passed, and that at intervals of twenty-four hours. Our present patient, as we have also seen, has been subject to this peculiarity. In one instance seventeen hours elapsed without passing any, and without any sensation requiring it. We are, with regard to this mode of diagnosis, obliged then to recollect that the depressing influence of opium upon the renal secretion is not much exerted until the poison has been some time at work, and that as an auxiliary, in our diagnosis it loses much of its value, from coming somewhat late to our aid. We may direct our attention to the quantity passed, however, even in the earliest period, as a means of judging between spirits and opium, by taking another view of the question: not scrutinising the quantity as regards diminution, but as regards augmentation; we find that opium does not *augment* the quantity, and that spirit very frequently does; so constituting a contrast, and consequently a distinction, by which we obtain a means of judging, so far as that peculiarity goes, between the effects of the two respective agents. In accordance with this view of the subject, then, you will generally find where spirit has been taken that there will be a tendency to micturitions; much, of course, still depending upon the quantity of spirit taken, something upon the kind of spirit, and something upon the period or stage of its effects, at which our judgment is required. In ordinary drunkenness we know the tendency to micturition is increased, but in drunkenness to such an extent, that an apoplectic state is induced, there may be retention on the one hand, from the bladder not being able to act, or incontinence on the other, from the sphincter being unable to restrain: but with reference to a case such as that which we have now under our notice, that is, in a case of drunkenness causing a similar degree of stupefaction, and with equal capability of being aroused for short intervals, the great probability is, that a tendency to micturition would have prevailed.

The state of the iris has been appealed to with great confidence as a distinguishing sign; and amongst the symptoms produced by opium is enumerated contracted pupil, and most commonly that is the state in which it is found; in the instance of our patient it was so on his admission, and during the night, and it was also contracted when we saw him on the two following days, though much less on the third day after taking the opium than on either the first or second. So common a symptom is contraction of the pupil, that it might be deemed almost decisive, if alcoholic agents producing general symptoms analogous to those produced by opium, were either passive as regards the iris, or if not being passive, they produced an opposite effect, dilatation, for instance; but we do not find this to be the case; the pupil under poisoning by alcohol, the kind of poison we are now considering in comparison with that by opium, although producing generally dilatation, also produces in many instances contraction of the iris; and in some instances dilatation and contraction alternate with each other, even in the same stage. The cases I have just spoken of as having been the subjects of particular observation in the police-office at Aberdeen, presented several examples of both dilated and contracted pupil. It is considered that the dilated pupil is most common where the degree of intoxication is extreme, and deep coma is present; yet in some of the cases referred to, where the coma was most profound, the pupil was still contracted. We fail, therefore, to find in the state of the pupil, an indication that we can venture to rely upon as to the kind of poison under which the system is suffering, whether opium or alcohol. It will be proper not to forget, however, that as in the majority of cases of poisoning by opium, when the effect of the drug is sufficiently great to produce a state of coma, the pupil is contracted; so in cases of poisoning by alcohol, where coma is also the consequence, in the majority of cases the pupil is dilated, and insensible to light; and further, it is desirable to recollect that the degree of dilatation is greater in proportion as the coma is more profound: hence in reviewing the evidence afforded by the condition of the pupil, we arrive at the conclusion that although a state of contraction does not confirm a supposition that opium has been taken, it strongly favours that opinion; and, on the other hand, that a dilated pupil, although it does not afford a positive indication, affords at least strong presumptive proof of alcohol being the poison.

While I am speaking of the influence of these agents upon the iris, it may tend to impress the subject still more on your recollection, if I advert to the attention which has been bestowed upon the state of the pupil in reference to prognosis as well as diagnosis. According to the experience of Mr. Bedingfield, the degree of danger from intoxication may be best estimated by the irritability of the iris, and if it retains its contractile power the patient will recover, however overpowered his senses may be; but should it remain in a state of extreme dilatation, when a strong light is directed upon it, a feeble hope of recovery can be entertained. This

insensibility of the iris is considered, next to want of energy of the stomach, to indicate the greatest danger. This paralysis of the iris is generally accompanied by apoplectic stertor, laboured and imperfect respiration, and a slow oppressed pulse. I may, in relation to this subject, again allude to the police-office cases at Aberdeen. Dr. Ogston, of Edinburgh, classified certain cases (in number twenty-six) with reference to the pupil, and the facts brought together in that classification are highly valuable. In six the pupil was contracted and the coma profound. The body generally preserved its natural warmth; the countenance was pale, and the breathing stertorous. The twenty with dilated pupil had the pulse either imperceptible, or very feeble and slow; the coma profound; the extremities often cold; the face generally flushed, and the breathing either laborious or calm, but usually slow.

The state of the respiration under the two kinds of poisoning constitutes an interesting consideration. The respiration under the influence of drink is usuully disturbed, often laborious and stertorous; under the influence of opium it is generally calm, regular, and not stertorous: this was the state of the breathing in our patient, and he is thus an illustration of the ordinary effect of opium in that particular. This peculiarity, the calm breathing, and the absence of stertor, where the patient is under the influence of opium, deserves, I think, more attention, and more confidence than is generally given to it, as an element in the business of diagnosis; it is a peculiarity which has claims upon our confidence, not because of the frequency of its occurrence only, but because when considered with reference to pathology, the probability of its being a valuable sign is enhanced by the results of dissections and post-mortem examinations, showing that the tendency to apoplexy is much greater under the effects of alcohol than under the effects of opium; thus even where apoplexy is not fully produced, but only a state approaching to apoplexy, as is commonly the case in drunkenness, difficulty of breathing, approaching more or less to stertor, is almost a natural consequence; while under the influence of opium, which affects the nervous system as a sedative, rather than the vascular system as a stimulus, the breathing is subdued and calm, rather than excited and laborious.

You may, perhaps, be a little discouraged by the seeming complexity and difficulty of distinguishing the effects of different agents on the system, as, for example, in the case under our present notice, the effects of opium from those of spirit, the more especially as not a single symptom can be pointed out which does not require qualifying considerations, nor a single rule which has not its embarrassing exceptions: it must be remembered, however, that we do not in any disease expect to be able to recognise it by an individual symptom, any more than we expect to be able to recognise a landscape by examining some one particular object of the many that comprise it. In judging, then, of disease, and, for example, of such a disease as that which occupies our attention, it behoves us, after examining each symptom in detail, and after having noticed the peculiarities of each, and after having made due allowance for the uncertainty of specific symptoms, to determine on which side in the aggregate the indications preponderate; this will generally conduct us to right conclusions, for although with regard to each symptom there is an exception to each rule, yet in most instances the rule will prevail over the exceptions, and amongst the symptoms there will be a majority of those which usually characterise the disease which really exists; still we must be guarded against making this a mere *numerical* problem. We must not determine wholly according to the *number* of symptoms on either hand; but we must let the importance and bearing of each have their full weight. If we look back at the symptoms existing in our present patient when admitted, we find a strong tendency to drowsiness; insensibility almost amounting to coma; a pulse 96, soft. In these we have symptoms which may be, and, indeed, commonly are, the result of either alcohol or of opiate, symptoms almost common to both. We find, also, capability of being awakened, but a tendency to fall back into a deep sleep almost immediately. In this we have also a symptom common to both, but we may perceive this difference, that the wakefulness (though momentary) of the drunken man when roused, is still characterised by the maudlin stupidity of drunkenness, while that of the victim of opium is a much nearer approach to the natural state.

We find, also, the vessels of the conjunctiva red; this is a symptom that rather belongs to the class characterising drunkenness. You, perhaps, recollect that the patient had taken some spirit as well as laudanum; I do not venture to attribute it to that cause however, and think it should rather be regarded as an accidental circumstance, not favouring the opinion that opium had been taken.

We next find calm breathing, with absence of stertor; pupils contracted; absence of sickness; absence of micturition; absence of alvine action: these are a series of symptoms, if not constant, at least very common under the influence of opium; they more than outweigh any peculiarity that might attach to the other symptoms, and leave no reasonable doubt of the nature of the poison taken.

I need not occupy your time with a detail of the treatment in this case: you are already aware that evacuants were our chief resources. The bowels were very inactive, and recourse was had to active purgative medicine, and he had occasional doses of am-

monia; his health, however, was pretty good, and he recovered rapidly. He left the hospital this morning well. His abrupt departure was to avoid a personal inconvenience to himself, which he had reason to apprehend. You recollect that he was brought into the hospital by policemen, and he had reason to suppose that in the fulfilment of their duty they would, as soon as he could be removed, produce him at the police-office, to answer the charge of attempting self-destruction. I wished to have had an opportunity of speaking of his state to-day from personal observation, but he left the hospital without leave and without ceremony, three or four hours before the usual time of visiting.

ON THE

PATHOLOGY OF TUBERCULAR PHTHISIS PULMONALIS,

AND ON THE

PRINCIPLES OF TREATMENT.

By Sir Charles Scudamore, M.D., F.R.S.

(Concluded from p. 691.)

The rules of *Hygeia* are very numerous, and it is not my present purpose to do more than glance at them. The physical health, and also the intellectual and moral education, begin in the nursery, and largely indeed does right or wrong management there tell on the future years of life. In how great a degree may the infant at the breast imbibe health or disease, according to the purity of the milk! When the period arrives that allows of the mastication of solid food, what judgment is required that the kind and the quantity should be adapted to the tender organs of digestion. Some further years added, a more substantial diet is to be allowed than in the first changes from milk food. A thin, weak child, growing fast in height, may be benefitted by the use of a proper quantity of sound porter in the daily dietary, while one that is strong should never know the taste of fermented liquors of any kind.

I may mention as points of attention, purity of air in the apartments, and especially in the sleeping, obtained by having good space and adequate ventilation; the utmost cleanliness by regular ablutions; the occasional use of baths, cold or tepid, and at the sea in the proper season; and general sponging, or the use of the shower-bath under careful regulation, when more general bathing may not be advisable. In regard to exercise, all circumstances favouring, none can be so deserving of preference for the invalid as horse exercise, which, with less fatigue than walking, enables him to meet the air with incessant changes of it, and receive that freer expansion of the lungs, which is so desirable, more effectually than the ordinary modes of gestation can allow. When, however, this is not convenient or not practicable, an open carriage is next to be recommended. A close one is only to be chosen when the atmosphere would not allow exposure without hazard. The important functions of the skin, as promoted by regular exercise and frictions, are so well understood that they need not be pointed out.

Laennec displayed in a high degree the *master* mind in his investigation of the diseases of the lungs, and brought more new light to the subject than any other author before, or perhaps since. He prefaces his observations on treatment by remarking,—"From the facts formerly detailed, exhibiting the mode in which nature sometimes cures phthisis, it results that the most rational indications should be, as soon as we have ascertained the existence of the disease, to prevent the secondary eruption of tubercles; as, in this case, if the primary tubercular masses were not extremely large or numerous, which they very seldom are, a cure would necessarily take place after they are softened and evacuated. The second indication should be to promote the softening, and evacuation or absorption of the existing crop of tubercles." He says of bleeding, that it "can neither prevent the formation of tubercles, nor cure them when formed. It ought never to be employed in the treatment of consumption, except to remove inflammation or active determinations of blood with which the disease may be complicated: beyond this, its operation can only tend to an useless loss of strength."

The French physicians attach more importance to *derivative* treatment than we do. Where depletion from the blood-vessels may be required, Laennec prefers as the mode, leeches to the thighs. He considers that "the actual cautery and issues would seem to present the most rational means for preventing the formation of tubercles, as well primarily as a second eruption of them." He notices the employment of various alkaline remedies as deobstruents, expecting little good result from them. He advises change of air, and especially to that of the sea, in the following words: "Indeed, I am convinced that in the actual state of our knowledge, we have no better means to oppose this disease than a sea-voyage, and a residence on the sea-coast in a mild climate." After speaking of the various soothing medicines employed as palliatives, he concludes with this sentence—"In order to make a direct attack on the disease, we ought, probably, to be able to correct an unknown alteration in the assimilation or nutrition; that is, an alteration in the state of the fluids of the body."

In the work of Louis, full of information on the morbid anatomy of consumption, and in statistical details, we find the usual catalogue of French medicaments; decoction of

Iceland moss; syrup of poppy; infusion of violets; and "when fever was present without local inflammatory symptoms, an infusion of the pectoral flowers, a mucilaginous mixture, some broth, with two rice creams daily." He does, however, mention the occasional employment of more active means, as of opium, acetate of morphia, belladonna, acetate of lead, sulphate of quinine, blisters, leeches, and small general bleedings in case of hæmoptysis, and of pleuritic pains.

Andral has given a very copious analysis of the whole disease, and all that he has written deserves our best study and examination. Impressed more than other pathologists with the idea of an inflammatory character belonging to tubercles, Andral has a corresponding partiality to the use of general bleeding and leeches, any signs of pneumonia, pleurisy, or hæmoptysis appearing; and the latter he directs, on the French system of treatment, to distant parts as derivatives; using also such derivative or revulsive treatment by other means—chiefly the application of blisters. On the other hand, he sometimes uses emollient and narcotic poultices. Ptisans appear to constitute a principal part of the medicinal treatment, the details of which are as sparing as those of the pathology and morbid anatomy of the disease are copious.

If the history of consumption in all its complications were alone to be desired, the French writers whom I have already quoted would leave little or nothing to be desired; but it will surely be admitted that if one consideration can be of more high importance than another, it is the *treatment* of this dreadful disease, which consigns so prematurely to the grave a large proportion of the human race that die from disease. The work of Laennec has left him universal fame for his improved method of diagnosis, and his enlarged pathology of the maladies of the lungs; but can it be shown that he suggested any new or useful method of treatment? He may be said to have given a mixed opinion upon the question of the curability of phthisis, as will appear from the following passages:—

"Previously to the knowledge of the true character and mode of development of tubercles, and while consumption was considered simply as a consequence of the chronic inflammation and slow suppuration of the pulmonary tissue, medical men did not question (any more than the vulgar now do) the possibility of curing this disease by a suitable mode of treatment, especially if *taken in time*, and during the first stage of it."—"It is now, however, the general opinion of all those who are acquainted with the actual state of our knowledge respecting the pathology of diseases, that the tubercular affection, like cancer, is absolutely incurable, inasmuch as nature's efforts towards a cure are injurious, and those of art are useless." This is a melancholy view of the question, and, I trust, one erroneously entertained. In the next passage he qualifies, and indeed almost contradicts, his previous assertion; for he observes, "While I admit the incurability of consumption in the early stages, I am convinced, from a great number of facts, that in some cases the disease is curable in the latter stages, that is *after* the softening of the tubercles, and the formation of an ulcerous excavation."—Again: "To conclude, I think that the cure of consumption, where the lungs are not completely disorganised, ought not to be looked upon as at all impossible, in reference either to the nature of the disease, or of the organ affected."

A work has recently been published by Dr. Campbell, "On the Nature, Pathology, and Cure of Consumption," very elaborately written. He advocates the following theory on the formation of tubercle. After having expatiated on the nature of strumous dyspepsia, and the principles of its treatment, he states that "the pathological observations before delivered lead to the conclusion that, as a result of the abdominal affection just described, the blood becomes charged with particles derived from the materials of nutrition, which being carried forward to the lungs, are capable in some organisations of passing through their extreme vessels; and, hence, producing no effect; but which in other cases are retained by the capillaries, and thus by gradual accumulation form masses apparently homogeneous, to which we supply conventionally the name of tubercle."

Now this general description can only be applicable to the consequences of unhealthy assimilation and sanguification in any individual affected with confirmed errors of digestion—taken in the extended sense. Also this obstruction of the capillaries of the lungs is entirely an hypothesis; and it offers no explanation of that peculiar state of the system which, as I think, is to be ascribed to a specific condition of the blood. The leading object of this author's treatment, is the administration of the caustic alkalies, upon the following explanation:—"When all the circumstances, functional as well as organic, which co-operate in the production of phthisis are present, it is probable that from the very first derangement of the digestive organs, there exists in the blood a portion, greater or less, of the matter which finally settles in the lungs; and it is quite certain that in nearly every example this last act takes place only to a limited extent, an extent so limited as to interfere but little with their functions; and there is great reason to believe that if the deposition was arrested at this period, those few and scattered tubercles which are then present would either remain latent, or that the powers of the system would be sufficient to extrude them successfully in a softened state. It is hence the accumulative tendency displayed

by these bodies which we have the greatest reason to dread; and it is this which an alkaline treatment appears to counteract more successfully than any other. I am not, indeed, prepared to say that it effects the absorption of existing tubercles, though by a few of the cases afterwards given, some evidence of this appears to be afforded; but I believe it often capable of checking the increase of these bodies, and thus effecting the only purpose we can rationally propose to ourselves in the early treatment of the complaint."

It is evident that from having found a certain degree of solvent property of the caustic alkali on tubercles extracted from the lungs, he was led to this theory of treating the disease, with the direct view of dissolving the tubercular matter in the circulating blood.

I find that the liquor potassæ rather reduces the solid tubercle to a state of pulpy mass, than brings it into solution; and to effect this softening, maceration aided by gentle heat is required. The analogy, therefore, between this chemical effect in a vessel, and the action of a dilute state of the alkali administered to the stomach, is wide indeed, But in the author's theory are the premises themselves true? What proof have we that the tubercular matter exists in the circulating blood. As we have found, by examination, the blood of consumptive patients, in the advanced stage of tubercles in the lungs, does not afford to the microscope any evidence of the characteristic tubercular cells. I argue, therefore, that tubercles are formed in the part where they are found, from the influence of the specific virus in the blood, causing this especial morbid action of the capillaries of the lungs or other parts. I repeat, every poison has, as it were, its own laws of acting; and it is not more surprising that it, in the present case, should produce tubercles as its final result, than that the variolous poison should produce pustules on the skin. The *theory* only of the alkaline treatment is new; the *practice* has been often tried.

It is very evident that we have to consider the nature of consumption in a twofold point of view,—the state of the constitution generally, and of the lungs distinctly. I conceive that the disease has really commenced before any manifestation of it has appeared in the lungs;—not that we can, even by auscultation and percussion, with certainty detect the first presence of tubercles in the lungs. The beginning invasion of the disease may not show itself by those signs which are considered to be most characteristic,—namely, cough, and some sensible inconvenience about the chest; and we always ought to take alarm when the individual, although in the possession of good appetite and undisturbed digestion, loses flesh and strength, has unusual frequency of pulse, and shortness of breath on taking quick exercise. The causes which predispose to the complaint are, unwholesome diet, inducing morbid assimilation; all circumstances, mental and physical, which tend to produce debility; and, above all, impure air, most especially that which is contaminated by the respiration of too many persons crowded into one apartment. In some manufactories, and in many of the dwellings of the poor, the evil in question may be found in the highest degree; but, also, it exists sometimes in the habitations of the rich, that desirable freedom of ventilation in the apartments, and especially in the sleeping, not being sufficiently an object of attention. In schools and in nurseries, many children should not sleep in the same apartment; certainly the fewer the better. A concentration of the animal poison of the human body, which is always being excreted, producing a miasm, must be a fertile source of injury. Comforts and indulgences carried too far, are more injurious to health than hardships and exposure. It is not in the open campaign that soldiers and horses incur diseases, so much as on the return to warm quarters. High temperature gives a very increased power to the deleterious influence of animal exhalations. The poor Irish family living in a miserable cabin, in common with their pigs, would of necessity generate disease more frequently than they do, were it not for the free inlets of air by open door, and hole of the roof serving as a chimney; increasing, it is true, the appearance of misery, but yielding, I think, a preservative ventilation. I think it probable that the wandering gipsies are rarely affected with consumption. Wild animals and those domesticated, shut up in small spaces, give a comparative example of the deleterious influence of confined air, and of tubercular disease as a consequence.

It must be a subject of regret that consumptive cases are so often neglected in their commencement, and that danger has actually arrived before the symptoms have attracted any serious notice. The individual is, perhaps, thought to be merely looking delicate; or that he may look a little consumptive, but that "the lungs are not yet touched."

I do not at all subscribe to the opinion of Laennec, of the inutility of art in the first stage of the disease. On the contrary, I assert that it is then we have most opportunity of being useful. It is true that the disease does sometimes set in with such violence as to form acute (galloping) consumption, and defy all means of treatment to arrest its fatal progress. These instances are exceptions to the general rule.

And in every case, however discouraging may be its aspect, we owe it to humanity, to science, and to our professional credit, to make every exertion in our power with a curative intention; and, also, not allow our-

selves too readily to fall into despair of doing good.

The general principles of treatment of tubercular phthisis may be laid down; but it is obvious that their application must be modified with strict relation to the individual case. The disease may be comparatively simple, its whole force bearing upon the lungs, without any sign of error in the digestive organs; or it may be combined with error in them, and especially in the functions of the liver. It is not an inflammatory disease, but it may be complicated with several morbid conditions of the lung, as congestion, partial inflammation, induration, and emphysema.

Pleuritic inflammation, followed by adhesions and thickening of the membrane, as I have before mentioned, is the most frequent occasional attendant on tuberculated lungs. It appears to me probable that the great freedom of secretion and discharge which almost always attends an ulcerated cavity, must very much tend to relieve the vessels and counteract inflammatory action; and when pneumonia attacks a tuberculated lung, it happens, according to my observation, usually at a distance from the cavity, and in the lower lobes. When the secretion of a cavity finds admission into the bronchiæ, it proves more or less irritating to the mucous membrane, and helps to induce inflammatory action and thickening.

Whenever it happens that hæmoptysis, or pneumonia, or pleuritic inflammation, occur, as the accidents of the disease, it is of the highest importance, in my opinion, that the greatest care should be used not to take away more blood, either generally or locally, than may be absolutely necessary. I regret the loss of every drop of blood in a consumptive person; but in thus expressing myself strongly, I will not be considered as careless of the necessary treatment of depletion to a certain amount in circumstances of increased vascular action, just mentioned. We should study to lessen the necessity of bleeding by the use of blisters, and other local means, in conjunction with constitutional treatment. I have witnessed, not unfrequently, the most unfavourable results from what is called the bold use of the lancet or cupping, or even leeches applied too frequently, and in too great numbers, for the purpose of overcoming either of the evils I have stated.

The former treatment of consumption by means of low diet, the milk and vegetable, and farinaceous food, with cooling fruits and courses of digitalis, no longer, I hope, finds an advocate. Consumption, as the term expresses, is a most wasting disease, and essentially one of debility.

As the most fundamental principle of practice, therefore, I would lay it down, that we should be most watchful to support the vital powers of the patient, by a well-arranged system of extra-nutrition, and of fluid stimulus. In order to give more explanation to my meaning, I would desire the use of animal food twice a-day rather than once; of a slow decoction of cocoa-nibs with a good proportion of milk, instead of tea, at the breakfast meal; of sound porter at dinner, and, in some instances, of a little wine also in the course of the day.

The general regimen includes a careful consideration of out-door exercise when the weather admits, and the modes of it, as applicable to the individual; with the use of those expedients as a substitute when circumstances require a confinement to the house, as swinging, walking at stated times of the day in spacious apartments with window or windows opened, the clothing being added as if for open exposure; and, simple as it may seem, there is advantage in the use of a back board, with which, properly applied, the patient should walk about the room to and fro, practising, at the same time, increased inspirations and expirations. Ablution of the chest at night or in the morning, or both, with a lotion composed of two parts of water, one of acetic acid, and one of eau de Cologne, tepid or cold, according to circumstances, followed by friction with the flesh-brush, is a measure of great utility.

For any one in the state of tubercular phthisis, no bath is admissible, except the warm or vapour bath, and only in the early stages of the complaint, and when the skin is dry, or if there have been formerly any cutaneous disorder which it may be desirable to study to recall. In hæmoptysis it is unsafe to give an impetus to the circulation by warm bathing.

Any complication of tubercular phthisis with other disorders must be treated accordingly, by combined means. Thus, although mercurial alteratives are not applicable to the relief of the pulmonary disease, yet they may be of essential benefit in correcting a state of disordered functions of the liver which is occasionally attendant on phthisis.

The list of medicines which have any just title to be called specifics, or exerting an especial curative property in particular diseases, is very small. It is a great desideratum, the knowledge of a medicine which should have a specific agency and control over the state of the system, which gives rise to the tubercular disease, capable of effecting the necessary change in the mass of blood. This may possibly be discovered by accident, or by future experience. In the mean time, let us employ with care and study the many excellent means which are in our possession.

I wish to enter my protest against a practice, more of former times than the present, of sending away a patient for change of climate when labouring under a dangerous degree of phthisis, especially if ulcerated cavities be formed; and committing, in great measure, perhaps wholly, the chances of amendment to such influence.

How much more humane, judicious, and scientific, to treat the case at home, with all the care of a watchful superintendence. How many things must be left to unhappy chance when the invalid is travelling with various uncertainties of required ease and comfort, and the disorder in all probability daily gaining ground; for when it is confirmed, and that tubercles are so inveterate that either ulcerated excavations have taken place, or must follow, a change of climate cannot prove a remedy, unless, indeed, in some solitary instance, in which nature may, in a wonderful manner by her *vis medicatrix*, effect a cure.

Although the tubercles of the lungs are, in my view of the subject, the offspring of a morbid cause existing in the blood, and therefore not the whole disease we have to treat, yet they constitute the most important feature of the disease, and must always engage our most serious consideration. As foreign bodies only, they must be more or less a source of irritation to the lung. I think it highly probable that they may differ very materially in their degree of virulence, and that they may not produce their whole effect simply as foreign bodies.* I have repeatedly found large calculi strongly impacted in the parenchyma without any evidence of irritation being produced, even when the portions have been angular, and much more likely, one would suppose, to create irritation than soft substances. Also, we know that the lungs will sometimes tolerate the presence of tubercles for indefinite periods of time. But in whatever way we reason on the subject, it must be highly desirable to effect the removal of tubercles from the lungs, for independently of their usually being so direct a cause of dangerous irritation to the organ, they do either by their pressure on the air-cells, or by an actual occupation of them, materially interfere with regular aeration and the decarbonisation of the blood. Chronic bronchitis is always more or less an attendant on the tubercular condition when at all active, and hence theory must be in favour of applying to the affected parts a medicinal agent of sufficient power to produce a decided change of action. On such grounds I was led, about fourteen years ago, to make trial of the inhalation of iodine in the way of inhalation, as being a medicine highly capable of stimulating the absorbents of the lungs, which are not few, to remove tubercular matter; of inducing a healing process in a cavity when formed; and of correcting the morbid action of the bronchial mucous membrane. Having in my book * on Inhalation entered upon much explanation of this remedy, with cases in illustration of my doctrine, I may be allowed to be brief on the present occasion. The addition of a *saturated* tincture of conium has a very useful effect in softening the action of the iodine, and in soothing the mucous membrane.

Experience has amply justified my recommendation of this treatment, and I have had the happiness of succeeding in very numerous cases, in which, according to all my former experience with the old methods of practice, I must have failed. It cannot be the reproach of any treatment that it should fail in the worst cases—those which are either become incurable from long neglect, or from their originally inveterate nature. This truth I also assert, that even when the case is too urgent to admit of success, certain relief will be afforded.

It is essential that a glass inhaler should be used; that it should be of good construction, and well fitted with capacious tubes; for then the patient, however feeble may be his respiratory powers, can inhale without any difficulty. The patient should be instructed to inspire with so much effort as that, without being painful or fatiguing to him, the volatile properties of the mixture may traverse the air-passages to a sufficient extent. As shown in my pneumatic experiment (p. 687), the natural force of ordinary inspiration would be very insufficient; and this fact, together with the great advantage of administering an exact dose, and gradually and skilfully increasing the proportions, must, I think, convince every dispassionate person of the great superiority of this *exact* method over that occasionally recommended, of having the vapour of iodine diffused over the apartment, in order that the patient should breathe in such medicated atmosphere.

I find no reason to alter the formula of the iodine solution which I have already more than once published, and which is as follows:—

℞ *Iodine*;
Iodide of potassium, aa, gr. vj;
Water, ʒv ʒvj;
Alcohol, ʒij. M.

To be used by inhalation.

I always begin with a small proportion, in no case less than ʒss, and in progress never exceed the total dose of ʒv, directing two-thirds of the quantity to be used for the first half of the time, and the other third for the remainder; for otherwise, so volatile is the iodine, that the inhalation would be too strong at first, and too weak at

* I inoculated a dog with the contents of a tubercular cavity, and the animal was ill for two days with sickness and loss of appetite, the part itself being inflamed: a week after the same dog was inoculated with pus from a common abscess, without the smallest inconvenience being produced.

* Cases illustrating and confirming the remedial power of the Inhalation of Iodine and Conium in Tubercular Phthisis, and various disordered States of the Lungs and Air Passages. Second edition. 1834.

last. The tincture of conium I use in 3ss doses, and this being much less volatile than the iodine, need not be increased, unless the mucous membrane is unusually irritable. The inhaler should not be quite half full with water at 120°, or equal parts of cold and boiling water which give about this temperature, and which should be maintained by immersing the inhaler in a jug of hotter water, say 130°. Observations, not of full approval, have sometimes been made respecting this remedy by those who either have never used it, or made only very imperfect trials of it, and evidently without that confidence in its utility which is necessary to the satisfactory result of any medical treatment that is adopted. Unless the physician himself feel confidence he cannot inspire his patient with faith; and which, to a certain degree, is very necessary for the success of medicine.

It has sometimes been called merely a local treatment, and were it so, how much deduction would be made from its importance? But even this criticism is not just. The inhalation acts upon the whole system, as I have had proof of by witnessing, even inconveniently, the constitutional effects of iodine; but to this admission let me add, such disagreement has not happened in so large a proportion of instances as one in a hundred.* When I deliberately affirm this as a truth, surely the most timid cannot shrink from the remedy. What medicine is there of any power which does not occasionally disagree in particular idiosyncrasies of constitution? Further, I never, in important cases, confine myself to the use of inhalation, but have recourse to all other things to which my judgment directs me; and hence another reason why the fastidious ought not to think lightly of the treatment; or call it superficial.

I am deeply and conscientiously convinced that in proportion as the inhalation of iodine and conium in tubercular phthisis and chronic bronchitis is more used and really understood, and done justice to, so will its high value become known, and its good name be established. I pronounce it to be a very far superior remedy for inhalation than chlorine, creosote, or any other means which have been tried. In no other medicinal combination, indeed, can I find an approach to the curative power which this in a large degree possesses. This practice should be persevered with for a great length of time, beginning with twice a-day, soon increasing to three times, then decreasing to twice, afterwards to once, and even occasionally suspending its employment; by which plan, on its renewal, its efficacy may be the greater. As to the time also of continuing the inhaling; five or ten minutes may be mentioned for the beginning, to be increased in progress to fifteen, twenty, or twenty-five minutes.

For the sake of humanity, then, I recommend the treatment; and will repeat what I have said in my preface to the work before mentioned, "It is not on selfish grounds that I advocate the practice. What concerns my reputation or advantage, is personal and transient, and of little moment; what relates to science and the interest of mankind, is for all ages, and of inestimable importance."

As an internal alterative, I think very favourably of the following mixture, which may be taken by itself, but usually agrees better when mixed with an equal proportion of very hot milk; two, or three, or four tablespoonfuls for the dose, two or three times a-day:—

℞ *Bruised sarsaparilla*, 3iij;
Lime water, ℥xij.
Macerate for twelve hours and strain.

℞ *Of the strained liquid*, ℥xj;
Syrup of sarsaparilla, ℥vj;
Alkaline solution (Brandish), 3ij to 3iij;
Tincture of orange bark, or *compound tincture of gentian*, 3ij to ℥ss;
Iodide of potassium, gr. ix, to gr. xii.
Make into a mixture.

After a longer or shorter course of this medicine, I prescribe a preparation of quinine with the aromatic elixir of vitriol, and with or without the addition of small doses of sulphate of iron; or, in other instances, I am led to prefer that excellent preparation, the mistura ferri composita.

The usual practice of giving expectorants, with a view to free the bronchial morbid secretion, I disapprove of, as tending to debilitate the stomach, the powers of which it is so important to strengthen and improve; and for this object of free expectoration, I trust to inhalation and means that support the strength. The addition of a saturated tincture of ipecacuanha to the inhaling mixture, is an useful incentive to expectoration. It is always important to the invalid that a good portion of sleep at night should be obtained. Sometimes this advantage will be allowed by the disease; but in the majority of cases, aid is required on account of the irritation of cough, and of nervous restlessness.

The following soothing syrup I have had reason to approve:—

℞ *Solution of acetate of morphia* (gr. j to gtt. vj), gtt. x;
Dilute sulphuric acid, 3ss to 3j;
Syrup of tolu, 3ix.
Make into a syrup.

Of this a teaspoonful is the ordinary dose, mixed with a little water; and it may be repeated in the night if necessary. If insuffi-

* Now and then, but very rarely, a superficial, dark-looking ulceration appears in the throat; but, on the suspension of the inhalation, and the use of a gargle, it will soon pass away, when the inhaling may be renewed without fear. I have very rarely indeed seen a recurrence of this inconvenience. It is not of importance.

ciently anodyne, a small portion of Battley's sedative may be added. If the stomach require the addition of a stomachic ingredient, the tincture cinnamomi composita is the best that I can mention.

Night perspirations are sometimes so excessive, as quickly and seriously to increase the debility of the patient. I have found much advantage from the free application to the chest before and behind, and the armpits, of the lotion, as at p. 713; substituting for the two proportions of water, the same of an infusion of pure tannin; two drachms to be macerated in twelve ounces of hot distilled water for twelve hours, and then strained.

One of the most distressing complications with pulmonary tubercles is a tubercular formation on the peritoneal coat of the intestines, or in their mucous follicles, so frequently accompanied with ulceration, in patches, of the mucous membrane. Diarrhœa of a most troublesome character ensues, and the patient is quickly reduced to great debility. I attended a lady who had recovered in a remarkable manner from pulmonary tubercular phthisis, and having remained well for several years, was seized with all the symptoms of intestinal irritation from tubercles. The vital powers became so prostrate, I thought she would have sunk. Much advantage was derived from small lavements of a strong decoction of pomegranate and starch, with the addition of tincture of opium, and cordial stomachic restringents with opium, and as supporting a diet as the stomach would allow, with the addition of suitable portions of brandy and wine in the respective nourishments, or in water. She quite recovered, and has not had any return of the pulmonary disease.

Counter-irritation is a part of auxiliary treatment too important to be overlooked. I think it is chiefly called for when there is a tendency to hæmoptysis or pleurisy; and for the most part I am induced to give the preference to small blisters. In some individuals, however, this treatment causes so much irritation and consequent depression of strength, that it makes a doubtful balance of good and evil. Less of this inconvenient consequence results from the use of the acetic solution of cantharides as originally prepared by Mr. Garden, of Oxford-street, according to my prescription; but although it takes effect promptly and with certainty, it does not act so much as the plaster of cantharides on the deeper-seated vessels, and causes a thinner discharge.

The other modes of counter-irritation I have treated of elsewhere, and I do not think it necessary to enter here on further details. I have offered my practical remarks so far because I hope they may be useful; and I would not be understood as ever speaking of inhalation as the sole treatment which I recommend.

I cannot refrain from remarking, that some are so bigotted to their own experience and old methods of practice, consecrated by time, but certainly not recommended by success, that they repel the introduction of what is new, especially when the remedy requires much watchfulness of its action in order to ensure its good results. Great perseverance also is necessary; nor can this appear remarkable, if we reflect upon the important and difficult nature of the work to be accomplished; the removal of tubercular matter from the lungs by means of absorption; the healing of an excavation; the relief and cure of bronchial disease; and, lastly, a change to be effected in the system—in the whole mass of blood. It is too true that our best and most anxious efforts may frequently be doomed to meet with the pain of disappointment; but the satisfaction of the occasional success with which we may be rewarded will be proportionably gratifying; and in those instances where the inveteracy of the disease will not permit success, we should assure ourselves conscientiously that we have done all in our power to obtain it.

I now bring to a conclusion this imperfect outline of the pathology of tubercular phthisis, and principles of treatment; well aware that a large field of inquiry still remains to be explored.

Wimpole-street, August, 1842.

THE FORMATION OF TUBERCLE. FATAL DISEASES.

To the Editor of THE LANCET.

SIR,—I have read the opinions of Sir Charles Scudamore and Dr. Campbell, as well as those of most well-known pathologists, on the formation of tubercle. The pathology of tubercular deposit has not yet been decided by ocular demonstration, even by Dr. Carswell; and I think I may venture to predict that it never will be: for the atomic elements concerned in these chemical changes are far beyond the pale of our sensual perception. It is only by the induction and equation of known phenomena, by the higher efforts of intellect, that these abstruse physiological processes can be explained. I cannot help commenting upon the very general proneness of medical reasoners to reject all evidence which they cannot test by the external senses alone; virtually confessing their inability to proceed beyond the first steps of intellect,—those of simple and direct perception. But I would observe that this system of proceeding has done little or nothing for the higher branches of science; and I am equally satisfied that it can do no more for the elucidation of the abstruse processes of physiology. The external senses can have but little share in these almost metaphysical sublimities. Yet it is not long since our Royal College of Surgeons, and one of the medical societies, offered

prizes for the best descriptive treatises concerning the shape and diameters of the capillaries, and such like mechanical questions; whilst the capillaries vary as much in their proportions as do the stupendous objects of nature: nor can anything be shown of their physiology by the line and rule, their proper mechanical purpose being simply a minute subdivision in order to a general pervasion, their tissues being permeable by the elements which they convey; and the changes which occur in these elements, during the physiological processes, being governed by the vital or involuntary nervous action, which in health produces nutrition, the deposit occurring on the elective chemical principle of *similia similibus;* whilst under an abnormal or diseased nervous government the elementary deposits are erroneous, and under varied circumstances may produce tubercle, cancer, medullaria, rheumatism or gout, calculus, asthexia, rickets, hydrops, diabetes, or even spontaneous combustion. For these constitute the natural order of cachectic diseases, and they depend essentially on low vitality.

Sir Charles Scudamore entertains the opinion that the formation of tubercular matter may be referred to a specific virus in the blood, observing that every distinct animal poison produces morbid phenomena in the constitution peculiar to itself; that it is not more difficult to believe that a tubercular poison in the blood should give rise to the formation of tubercles, than that small-pox virus should produce small-pox pustules on the skin.

I would remark, that small-pox is a *contagious* disease—tubercle has not been proved to be so. But tubercle is an *hereditary* disease, like gout, which is not contagious. There is an important distinction between contagious and hereditary diseases. Had hereditary diseases been contagious or poisonous, they would have lost their merely hereditary character long ago. Now these are indisputable arguments. It is thus clear that hereditary diseases are hereditary, not because the diseased products (as poisons) are handed down, but from the peculiar organic constitution of the family, and consequent liability to the same functional derangement, and chemical products in the system.

It is not easy to prove why the capillaries of the lungs are so liable to deposit tubercle, further than that the locality as well as the tendency itself may be hereditary. But the reason may be hazarded, that here, as in the glands, the elements concerned in the natural processes are more subjected to the accidental presence and increase of reagents, both as regards quality and quantity. But we observe, also, that all the cachectic deposits have each their peculiar nidus. Tumours are not properly cachectic, but parasitic in growth, and may arise from a capillary lesion any where. Cancer and medullaria are real cachectic and adventitious deposits (they may take the form of cells, as shown by Mr. Toynbee, from the shape of their molecules); they are peculiar to their own parasitical nidus, namely, the scirrhous tumour. Rheumatism (a semifluid lithate of soda) has its nidus in the muscular or fibrous structures. Gout (a more solid lithate of soda) in the cartilage of joints. Asthexia, in the fibro-cartilaginous tissues. The bones are originally fibro-cartilage, which is the natural nidus for the deposit of bone-earth, from an approaching similarity of composition. Hence in the weakened vitality of age, by an easy transition from health to disease, the fibro-cartilaginous structure of the larynx, as well as that of the middle coat of the arteries, become a natural nidus for the deposit of bone-earth; and thus these structures in age become affected with the disease called asthexia implexa, or ossification. These arguments will explain the importance of the doctrine of *similia similibus* in healthy nutrition, as well as the deviations which occur in disease or depressed vitality. In decomposing the solution of a salt by a galvanic battery, one pole takes the acid and the other the alkali, and the process continues *similia similibus.* I maintain that the same occurs in the process of nutrition, that in the different tissues exist the types for elementary attraction, and that nutrition proceeds *similia similibus;* that the variations and changes of early development are not more remarkable or abrupt than the later supervention of asthexia implexa, in fibro-cartilaginous structures. I see no reason to believe with Dr. Carswell that tubercular matter, ready formed, ever exists in the blood, more than any other cachectic deposit; but, on the contrary, every reason, if these arguments and phenomena be true, to feel quite sure that it does not.

Depressed vitality is the cause of cachectic diseases. The true pathological definition of this order is as follows:—"Spontaneous derangement in the chemical products of the organic system; in popular language, bad habit of body," &c. (Stevens's Natural Order of Diseases, p. 115.) About one-third of the registered deaths occur from cachectic diseases, which are more than any other form increased by dense population, &c. Indeed, this order might be taken as the best test of the relative healthiness of different localities. But the system adopted by the registrar-general of classifying diseases locally as "Diseases of the Respiratory Organs," "Diseases of the Circulating Organs," "Of the Nervous System," &c. &c., is, in my opinion, exactly as absurd as it is useless. I offered a system of fatal nosology to the registrar-general, upwards of a year ago, but which has not even been noticed. It is highly desirable that some system should be used from which scientific

practitioners might derive advantage. We can only learn from the registration at present what organs have been affected by disease; we are not allowed to know anything concerning the *essential nature* of the diseases, which alone would be useful in a scientific point of view.

I would willingly submit my proposed plan to the opinion of the profession at large. Perhaps some other persons, who are also endeavouring to investigate the essential nature and causes of diseases, would be able to suggest improvements. I am convinced that a majority of scientific men feel with me the want of a better system than has been heretofore used by the registrar-general; and I doubt not that you, Sir, as a party concerned, will lend us your aid to obtain it. My observations in this letter and elsewhere may be a proof of my competency to judge as to what information we most require from the Government establishment for the registration of deaths.

PROPOSED NOSOLOGY OF FATAL DISEASES.

Class 1. VIROID ERUPTIONS AND FEVERS.—Small-pox, measles, scarlatina, syphilis, fevers.

Class 2. EPIDEMIC FLUXES.—Influenza, dysentery, diarrhœa, cholera.

Class 3. CONGESTIONS.—Congestion of brain (brain fever), congestion of heart (hypertrophy).

Class 4. INFLAMMATIONS.—Abscess, fistula, ulcer, erysipelas, inflammation of veins, of the brain, throat (quinsy), larynx (croup), bronchiæ, lungs (pleurisy), heart (and pericarditis), stomach, bowels, liver, kidneys, bladder, womb, peritonitis.

Class 5. SPASMODIC DISEASES.—Hooping-cough, laryngismus stridulus, asthma, convulsions, epilepsy, hydrophobia, tetanus, stricture, colic.

Class 6. CACHECTIC DISEASES.—Struma, consumption, mesenteric do., rheumatism, gout, stone, ossification, rickets, diabetes, the dropsies, cancer, medullary ditto, spontaneous combustion.

Class 7. DIRECT ADYNAMIÆ.—Syncope, delirium tremens, typhus, mortification, atrophy (of heart, &c.), privation, debility, old age.

Class 8. ACCIDENTAL AFFECTIONS.—Apoplexy, paralysis, aneurism, hernia, intussusception, obstruction (of tumours, &c.), malformation, childbed, violent deaths.

Class 9. NONDESCRIPT.—The coroner's class.

All symptomatic affections are omitted. To say that a man died of *jaundice* or a *cough* would be equally instructive, as jaundice alone is not fatal. The same may be observed of insanity and teething, which latter comes under convulsions or hydrocephalus. Also simple tumours are only fatal by accidentally obstructing vital organs (see class 8). But scirrhus, or its productions, cancer and medullaria, hold rank in the cachectic class 6.

Death occurs in no form which cannot be aptly arranged under one or other of the above seventy genera, which contain all the pathological causes known to exist. I remain, Sir, yours most respectfully,

ROBERT STEVENS.

Kennington, August 7, 1842.

ABSTINENCE FROM THE USE OF THE FORCEPS AND ERGOT OF RYE IN MIDWIFERY.

To the Editor of THE LANCET.

SIR,—In your useful publication, THE LANCET, for June 18, 1842, my attention was particularly directed to a paper headed "Dr. Robert Lee's Clinical Reports in Midwifery;" and the appalling account there given of the cases in which the forceps were used, induces me to offer to you the few following observations:—

In my small work on Protracted Labours, &c., a copy of which was sent for your perusal, I endeavoured to show, from the considerably extended data of several hundred cases, that in labours in which the capacity of the pelvis and the position of the child are such as to admit of delivery by the natural efforts of the mother, almost universally every such labour, however obstinate, may be terminated by the usual means, in about twelve hours after the commencement of natural pains.

Fully three years have now elapsed since the publication of that work, and during that period I have been still engaged in midwifery practice, which enables me again to state that in every case, of the most unyielding and rigid description, by the use of the ordinary means, delivery was effected within twelve hours. From this additional experience I can scarcely entertain a doubt that were the same means put in operation, and in the same manner as I have directed, the result would be similar. It is not altogether the application of remedies that renders successful the practitioner's prescription: those remedies should be administered at proper intervals, and in moderate quantities, so as neither to disturb nor overload the stomach or fatigue the patient.

Obstetricians are greatly obliged to Dr. Lee for the very important cases he has laid before them, notwithstanding the deplorably defective state in which they exhibit the obstetric art to be, as well as the dreadful suffering and mournful consequences which arise from protracted labours, and the fearful result of the misapplication of instruments.

It is true that the experienced practitioner is generally tolerably successful in the use of instruments. Others, however, are not so fortunate. This being admitted, and as no practitioner can apply the forceps successfully and safely unless the state of the mother and the position of the child be suitable for their application, I trust it is shown that the very means which are calculated to bring about this desirable state of things are the very same as those which, when duly administered, remove the obstructing causes to delivery, and, in almost every instance, render the application of the forceps unnecessary.

I would here beg leave to suggest that midwives before receiving their licence to practise, should be instructed never to use the ergot of rye, in protracted labours, on their own responsibility. It is a most useful and safe auxiliary in such cases, when appropriately applied, but when the state of the case is unfavourable for its application, the life of the child is frequently unnecessarily sacrificed. I would further hint the propriety of instructing them to administer, in labours which extend beyond eight or ten hours, a purgative clyster, and an hour afterwards sixty drops of laudanum. By this procedure many of their cases would terminate in twelve or fourteen hours, which would otherwise be prolonged to twenty-four hours or longer. In the management of protracted labours of this description two things must never be forgotten, namely, the removal of inflammation, and the suppression of unnatural and inefficient spasmodic contractions of the uterus.

The disastrous result of the above-noticed cases has actuated me to transmit to you these observations for publication in your extensively circulated Journal, and perhaps they may tend to elicit renewed investigation into this department of the healing art.

I am, Sir, your obedient servant,

JOHN CRAIG.

Paisley, August 6, 1842.

TREATMENT OF

PROLAPSUS OF THE FUNIS,

BY

TURNING, THE ERGOT OF RYE, AND THE FORCEPS.

To the Editor of THE LANCET.

SIR,—In a recent number of THE LANCET I called the attention of accoucheurs to a case related by Dr. Beatty, of Dublin, in which he applied the forceps to the head of a dead child, with the view of ascertaining whether the practice was good or bad, whether it was to be imitated or avoided by others. As far as I can learn from the best writers on midwifery, and from some gentlemen experienced in the art, with whom I have conversed on the case, it is unjustifiable under any circumstances to apply the forceps to the head, breech, or any other part of a dead child. The publication of such a case by the professor of midwifery to the Royal College of Surgeons of Ireland, without any comment, is therefore only calculated to lead to the abuse of the instrument by inexperienced practitioners.

In looking into the "System of Midwifery" by Dr. Rigby, which forms one of the volumes of Dr. Tweedie's "Library of Medicine," I have been a good deal surprised to find the following novel treatment recommended in cases of prolapsus of the funis, at page 235 :—

"Our practice," observes Dr. Rigby, "must be in great measure guided by the circumstances of the case. Where the os uteri is not fully dilated, where the head is still high, and not much engaged in the pelvis, the liquor drained away, and the cord beginning to suffer pressure during the pains, we dare not wait until the case be sufficiently advanced to admit the application of the forceps, but must proceed as soon as possible to turn the child. The operation should be performed with the greatest possible caution. *The cord should be guided to one of the sacro-iliac symphyses;* the expulsion of the trunk must be very gradual. A dose of secale should be given to ensure the requisite activity of the uterus when the head enters the pelvis, and the forceps kept in readiness to apply the instant that its advance is not sufficiently rapid."

Dr. Rigby does not relate the cases in which he employed this treatment, and he does not tell how many children were preserved by turning, the secale, and the forceps where the cord presented; but there can be little doubt, from the clear and positive manner in which the practice is here laid down, that the number has been considerable, and that the mothers escaped as fortunately as in Dr. Beatty's case.

A clinical report of all the cases in which Dr. Rigby had recourse to turning, secale, and the forceps, *having previously guided the cord to one of the sacro-iliac symphyses before the os uteri was fully dilated and the head was much engaged in the pelvis*, would be a truly valuable document, and might contribute to render the treatment more certain and successful than it has heretofore been where the cord prolapses. Until Dr. Rigby communicates the necessary details, and fully explains his treatment, I must be excused for entertaining the dread of rupture of the uterus, "where the liquor is drained away," and following the old practice. I remain, Sir, your obedient servant,

J. F. C.

August 1, 1842.

REMARKS ON THE

NOMENCLATURE AND CONSTITUTION

OF CERTAIN

PHARMACEUTIC SUBSTANCES.*

By Thomas Holt, M.D., Univ. Edin.; M.R.C.S. Lond. and Edin., &c.

The very same reasons which prompted the London College of Physicians to alter the names of some pharmacopœial compounds, and to adopt in some instances the supposed chemical nomenclature, might also have suggested to them that new names—sesquipedalia verba—should be adopted in other cases for the sake of *classical* uniformity! The terms potassa, soda, magnesia, calx, alumina, &c., do not point to the chemical composition of these substances, but *rather leave it to be understood* that the same are oxides of the metallic bases, potassium, sodium, &c. Nor do such terms as cyanogen, ammonia, &c., give the slightest idea as to how these are composed; who would see in the term cyanogen a bicarburet of nitrogen, or in ammonia a compound of 1 eq. of nitrogen and 3 eq. of hydrogen *ultimately*, or of 1 eq. of anidogen and 1 eq. of hydrogen *proximately?*

The names of many of the salts, as argenti nitras, plumbi acetas, &c., cannot be regarded *as literally correct*, but are used for their comparative shortness.

Many of the acids, as the nitric (NO_5), oxalic ($C_2 O_3$), acetic ($C_4 H_3 O_3$), &c., have not as yet been isolated, or shown to have any separate existence; and even if they could be so isolated, would be entirely different from their hydrated compounds which are received into the pharmacopœias. Anhydrous sulphuric acid *does not appear to be acid at all*, "does not redden litmus, and exhibits a disposition to combine with salts, such as chloride of potassium and sulphate of potash, rather than with bases." "The liquid carbonic acid has little affinity for water, does not combine directly with lime, but dissolves in alcohol, æther, and essential oils, like certain neutral bodies." The white precipitate of mercury of the late London and of the present Edinburgh pharmacopœias, was considered by Hennel to consist of

1 eq. red oxide of mercury,
1 eq. hydrochloric acid,
1 eq. ammonia.

Phillips and the London College name it ammonio-chloride of mercury, and consider it as composed of

1 eq. corrosive sublimate,
1 eq. red oxide of mercury,
2 eq. ammonia;

but Dr. Kane proves that it contains no oxygen, consequently *both the above must be erroneous.* The view proposed by the latter high authority, and in this opinion of its constitution he is supported by Liebig, Graham, Gregory, &c., is, that it is a compound of the anide with the chloride of mercury. Dr. Christison (Ph. Edinb.) considers it as "chloride of mercury (calomel) with ammonia." Another view of its constitution might be taken (which has not been suggested that I am aware of), viz., to consider it as composed of a compound basyle analogous to ammonium* with chlorine, for it has the composition of the chloride of ammonium, only that two atoms of hydrogen are replaced by two corresponding atoms of mercury; and Wohler's white precipitate has a similar composition, one atom only of hydrogen being replaced by mercury; and, according to Mitscherlich, the crystalline form of the latter belongs to the regular system, like that of sal ammoniac (quoted by Graham). This would rather tend to strengthen the eq. of mercury being 101, which has been doubtful, chemists being ignorant of any unobjectionable isomorphous relation of mercury to the magnesian family: in the above, however, we have mercury substituted for hydrogen (which is of the magnesian class), and the form of the crystal remaining the same. The following formulæ may be given; viz.

$H\,Ad + H\,Cl$ = Kane's formula for sal ammoniac.
$Hg\,Ad + Hg\,Cl$ = ditto white precipitate.
$NH_4 + Cl$ = Berzelius's view of sal ammoniac.
$(NH_2\,Hg_2) + Cl$ = view proposed of constitution of ordinary white precipitate.
$(NH_2\,Hg) + Cl$ = ditto of Wohler's white precipitate.
$Hg\,Cl + NH_2$ = formula of Wohler's white precipitate, given by Graham from analysis of Kane.

The constitution of the ammonio-chloride of copper, which appears analogous to that of the white precipitates, also favours the view proposed if the formula be compared.

$NH_3\,Cu + Cl$ = chloride of cuprammonium (Graham).
$NH_2\,Hg + Cl$ } = vide supra.
$NH_2\,Hg_2 + Cl$ }

This view of the constitution would apply also to the other precipitates of mercury, formed analogously with salts like the chloride. By-the-by, Dr. Pereira, in his work

* See also page 417.

* In medical practice, whichever view may be adopted of the chemical constitution, the term white precipitate of mercury appears as good as any, and not likely to be generally superseded; but if the view proposed be received *chemically*, a term composed of hydrargyrum and ammonium—like cuprammonium—would be objectionable from its length, but some such term as Hermammonium, from Ἑρμης, Mercury, might be suggested.

on Materia Medica, is not satisfied with such terms as potassio-tartrate of soda, potassio-tartrate of antimony, &c., but must coin new ones; and gives for the same, sodio-tartrate of potash, antimonio-tartrate of potash, &c.: thus adding to the confusion (which is already quite enough), without there appearing the slightest necessity, or those he proposes having any greater recommendation than the terms given by the college (if we are to have new ones).

Bury, Lancashire, Aug. 3, 1842.

DR. ADAM SMITH ON MEDICAL DEGREES.

We extract the following letter of Adam Smith to Cullen, from the appendix to Macculloch's edition of the "Wealth of Nations." Cullen had endeavoured through the influence of the Duke of Buccleugh to get a royal commission appointed for the visitation of the Scotch universities, with a view to correcting the abuses in their constitution and discipline, more particularly in the practices of Aberdeen and St. Andrew's in granting degrees. The Duke of Buccleugh requested Cullen to submit his memorial to Dr. Smith for his opinion. This having been done, Smith replied,—

"My dear doctor,—I have been very much in the wrong both to you and to the Duke of Buccleugh, to whom I certainly promised to write you in a post or two, for having delayed so long to fulfil my promise. The truth is, some occurrences which interested me a good deal, and which happened here immediately after the duke's departure, made me forget altogether a business which I do acknowledge interested me very little.

"In the present state of the Scotch universities, I do most sincerely look upon them as, in spite of all their faults, without exception the best seminaries of learning that are to be found any where in Europe. They are, perhaps, upon the whole, as unexceptionable as any public institutions of that kind, which all contain in their very nature the seeds and causes of negligences and corruption, have ever been, or are ever likely to be. That, however, they are still capable of amendment, and even of considerable amendment, I know very well, and a visitation is, I believe, the only proper means of procuring them this amendment. Before any wise man, however, would apply for the appointment of so arbitrary a tribunal, in order to improve what is already, upon the whole, very well, he ought certainly to know with some degree of certainty, first, who are likely to be appointed visitors; and, secondly, what plan of reformation those visitors are likely to follow. But in the present multiplicity of pretenders to some share in the provincial management of Scotch affairs, these are two points which I apprehend neither you nor I, nor the solicitor-general, nor the Duke of Buccleugh, can possibly know anything about. In the present state of our affairs, therefore, to apply for a visitation in order to remedy an abuse, which is not perhaps of great consequence to the public, would appear to me to be extremely unwise. Hereafter, perhaps, an opportunity may present itself for making such an application with more safety.

"With regard to any admonition or threatening, or any other method of interfering in the affairs of a body corporate, which is not perfectly and strictly regular and legal, these are expedients which I am convinced neither his majesty nor any of his present ministers would choose to employ either now or at any time hereafter, in order to obtain an object even of much greater consequence than this reformation of Scotch degrees.

"You propose, I observe, that no person should be admitted to examination for his degrees, unless he brought a certificate of his having studied at least two years in some university. Would not such a regulation be oppressive upon all private teachers, such as the Hunters, Hewson, Fordyce, &c.? The scholars of such teachers surely merit whatever honour or advantage a degree can confer, much more than the greater part of those who have spent many years in some universities, where the different branches of medical knowledge are either not taught at all, or taught so superficially that they had as well not be taught at all. *When a man has learned his lesson very well, it surely can be of little importance where or from whom he has learnt it.*

"The monopoly of medical education which this regulation would establish in favour of universities would, I apprehend, be hurtful to the lasting prosperity of such bodies corporate. Monopolists very seldom make good work, and a lecture which a certain number of students must attend, whether they profit by it or no, is certainly not very likely to be a good one. I have thought a great deal upon this subject, and have inquired very carefully into the constitution and history of several of the principal universities of Europe. I have satisfied myself, that the present state of degradation and contempt into which the greater part of those societies have fallen in almost every part of Europe, arises principally, first, from the large salaries which in some universities are given to professors, and which render them altogether independent of their diligence and success in their professions; and, secondly, from the great number of students who, in order to get degrees, or to be admitted to exercise certain professions, or who, for the sake of bursaries, exhibitions, scholarships, fellowships,

&c., are obliged to resort to certain societies of this kind, whether the instructions which they are likely to receive there are or are not worth receiving. All those different causes of negligence and corruption, no doubt take place, in some degree, in all our Scotch universities. In the best of them, however, those causes take place in a much less degree than in the greater part of other considerable societies of the same kind; and I look upon this circumstance as the real cause of their present excellence. In the medical college of Edinburgh in particular, the salaries of the professors are insignificant. There are few or no bursaries or exhibitions, and their monopoly of degrees is broken in upon by all other universities, foreign and domestic. I require no other explication of its present acknowledged superiority over every other society of the same kind in Europe.

"To sign a certificate in favour of any man whom we know little or nothing about, is most certainly a practice which cannot be strictly vindicated. It is a practice, however, which, from mere good-nature, and without interest of any kind, the most scrupulous men in the world are sometimes guilty of. I certainly do not mean to defend it. Bating the unhandsomeness of the practice, however, I would ask, in what manner does the public suffer by it? The title of doctor, such as it is, you will say, gives some credit and authority to the man upon whom it is bestowed; it extends his practice, and consequently his field for doing mischief. It is not improbable, too, that it may increase his presumption, and consequently his disposition to do mischief. That a degree injudiciously conferred may sometimes have some little effect of this kind, it would surely be absurd to deny; but that this effect should be very considerable, I cannot bring myself to believe. That doctors are sometimes fools as well as other people, is not, in the present times, one of those profound secrets which is known only to the learned. The title is not so very imposing, and it very seldom happens that a man trusts his health to another merely because that other is a doctor. The person so trusted has almost always either some knowledge or some craft which would procure him nearly the same trust, though he was not decorated with any such title. In fact, the persons who apply for degrees in the irregular manner complained of, are, the greater part of them, surgeons or apothecaries, who are in the custom of advising and prescribing, that is, of practising as physicians; but who, being only surgeons and apothecaries, are not feed as physicians. It is not so much to extend their practice as to increase their fees that they are desirous of being made doctors. Degrees conferred, even undeservedly, upon such persons can surely do very little harm to the public. When the university of St. Andrew's very rashly and imprudently conferred a degree upon Green, who happened to be a stage-doctor, they no doubt brought much ridicule and discredit upon themselves; but in what respect did they hurt the public? Green still continued to be what he was before, a stage-doctor, and probably never poisoned a single man more than he would have done though the honours of graduation had never been conferred upon him. *Stage-doctors, I must observe, do not much excite the indignation of the faculty; more reputable quacks do. The former are too contemptible to be considered as rivals. They only poison the poor people; and the copper-pence which are thrown up to them in handkerchiefs could never find their way into the pocket of a regular physician.* It is otherwise with the latter. They sometimes intercept a part of what perhaps would have been better bestowed in another place. Do not all the old women in the country practise physic without exciting murmur or complaint? And if here and there a graduated doctor should be as ignorant as an old woman, where can be the great harm? *The beardless old woman, indeed, takes no fees—the bearded one does; and it is this circumstance, I strongly suspect, which exasperates his brethren so much against him.*

"*There never was, and, I will venture to say, there never will be, a university from which a degree could give any tolerable security, that the person upon whom it had been conferred was fit to practise physic.* The strictest universities confer degrees only upon students of a certain standing. Their real motive for requiring this standing is, that the student may spend more money among them, and that they may make more profit by him. When he has attained this standing, therefore, though he still undergoes what they call an examination, it scarce ever happens that he is refused his degree. Your examination at Edinburgh, I have all reason to believe, is as serious, and perhaps more so, than that of any other university in Europe. But when a student has resided a few years among you, has behaved dutifully to all his professors, and has attended regularly all their lectures, when he comes to his examination, I suspect you are disposed to be as good-natured as other people. Several of your graduates, upon applying for a licence to the College of Physicians here, have had it recommended to them to continue their studies. From a particular knowledge of some of the cases, I am satisfied that the decision of the college, in refusing them their licence, was perfectly just; that is, was perfectly agreeable to the principles which ought to regulate all such decisions, and that the candidates were really very ignorant of their profession.

"*A degree can pretend to give security for nothing but the science of the graduate; and even for that it can give but a very*

slender security. For his good sense and discretion, qualities not discoverable by an academical examination, it can give no security at all for. But without these, the presumption which commonly attends science must render it, in the practice of physic, ten times more dangerous than the grossest ignorance, when accompanied, as it sometimes is, with some degree of modesty and diffidence.

"*If a degree, in short, always has been, and in spite of all the regulations which can be made, always must be, a mere piece of quackery, it is certainly for the advantage of the public that it should be understood to be so.* It is in a particular manner for the advantage of the universities that, for the resort of students, they should be obliged to depend, not upon their privileges, but upon their merit,—upon their abilities to teach, and their diligence in teaching; and that they should not have it in their power to use any of those quackish arts which have disgraced and degraded the half of them.

"A degree which can be conferred only upon students of a certain standing is a statute of apprenticeship which is likely to contribute to the advancement of science, just as other statutes of apprenticeship have contributed to that of arts and manufactures. Those statutes of apprenticeship, assisted by other corporation laws, have banished arts and manufactures from the greater part of towns-corporate. Such degrees, assisted by some other regulations of a similar tendency, have banished almost all useful and solid education from the greater part of universities. Bad work and high price have been the effects of the monopoly introduced by the former. Quackery, imposture, and exorbitant fees, have been the consequences of that established by the latter. The industry of manufacturing villages has remedied in part the inconveniences which the monopolies established by towns-corporate had occasioned. The private interest of some poor professors of physic in some poor universities, inconveniently situated for the resort of students, has in part remedied the inconveniences which would certainly have resulted from that sort of monopoly which the great and rich universities had attempted to establish. The great and rich universities seldom graduated any body but their own students, and not even them till after a long and tedious standing; five and seven years for a master of arts; eleven and sixteen for a doctor of law, physic, or divinity. The poor universities, on account of the inconveniency of their situation, not being able to get many students, endeavoured to turn the penny in the only way in which they could turn it, and sold their degrees to whoever would buy them, generally without requiring any residence or standing, and frequently without subjecting the candidate even to decent examination. The less trouble they gave the more money they got; and I certainly do not pretend to vindicate so dirty a practice. All universities being ecclesiastical establishments, under the immediate protection of the pope, a degree from any one of them gave, all over Christendom, very nearly the same privileges which a degree from any other could have given; and the respect which is at this day paid to foreign degrees, even in Protestant countries, must be considered as a remnant of popery. The facility of obtaining degrees, particularly in physic, from those poor universities, had two effects, both extremely advantageous to the public, but extremely disagreeable to the graduates of other universities, whose degrees had cost them much time and expense. First, it multiplied very much the number of doctors, and thereby no doubt sunk their fees, or at least hindered them from rising so very high as they otherwise would have done. Had the universities of Oxford and Cambridge been able to maintain themselves to the exclusive privilege of graduating all the doctors who could practise in England, the price of feeling a pulse might by this time have risen from two and three guineas, the price which it has now happily arrived at, to double or treble that sum; and English physicians might, and probably would, have been at the same time the most ignorant and quackish in the world. Secondly, it reduced a good deal the rank and dignity of a doctor. But if the physician was a man of sense and science, it would not surely prevent his being respected and employed as a man of sense and science. If he was neither the one nor the other, indeed, his doctorship would no doubt avail him the less. But ought it in this case to avail him at all? *Had the hopeful project of the rich and great universities succeeded, there would have been no occasion for sense and science. To have been a doctor would alone have been sufficient to give any man rank, dignity, and fortune enough. That in every profession the fortune of every individual should depend as much as possible upon his merit, and as little as possible upon his privilege, is certainly for the interest of the public. It is even for the interest of every particular profession, which can never so effectually support the general merit and real honour of the greater part of those who exercise it, as by resting upon such liberal principles.* Those principles are even most effectual for procuring them all the employment which the country can afford. The great success of quacks in England has been altogether owing to the real quackery of the regular physicians. Our regular physicians in Scotland have little quackery, and no quack accordingly has ever made his fortune among us.

"After all, this trade in degrees I acknowledge to be a most disgraceful trade to those who exercise it; and I am extremely sorry that it should be exercised by such respect-

able bodies as any of our Scotch universities. But as it serves as a corrective to what would otherwise soon grow up to be an intolerable nuisance, the exclusive and corporation spirit of all thriving professions and of all great universities, I deny that it is hurtful to the public.

"What the physicians of Edinburgh at present feel as a hardship is, perhaps, the real cause of their acknowledged superiority over the greater part of other physicians. The Royal College of Physicians there, you say, are obliged by their charter to grant a licence, without examination, to all the graduates of Scotch universities. You are all obliged, I suppose, in consequence of this, to consult sometimes with very unworthy brethren. You are all made to feel that you must rest no part of your dignity upon your degree—a distinction which you share with the men in the world, perhaps, whom you despise the most; but that you must found the whole of it on your merit. Not being able to derive much consequence from the character of doctor, you are obliged, perhaps, to attend more to your characters as men, as gentlemen, and as men of letters. The unworthiness of some of your brethren may, perhaps, in this manner be in part the cause of the very eminent and superior worth of many of the rest. The very abuse which you complain of may in this manner, perhaps, be the real source of your present excellence. You are at present well, wonderfully well; and when you are so, be assured there is always some danger in attempting to be better.

"Adieu, my dear doctor; after having delayed so long to write to you, I am afraid I shall get my lug (ear) in my lufe (hand), as we say, for what I have written. But I ever am most affectionately yours,

"ADAM SMITH.

"London, Sept. 20, 1774."

We shall notice some points in this clever letter next week.

EVOLUTION OF CALORIC.

Sic vos non vobis, &c.

To the Editor of THE LANCET.

SIR,—How far the credit of originality belongs to Justus Liebig, as some journals have lately said, for that part of his theory which appertains to the evolution of heat by intra-combustion, may be fairly learned by a perusal of the following extract from "Sir John Ross's Appendix to the Narrative of a Second Voyage," &c. &c., in a report drawn up by myself in 1834, and published in the same Appendix in 1835; such report being founded on the verbal communications of the surgeon of the expedition:—

"If the preservation of a uniform temperature by external means be of the highest importance, it must be admitted that the due and vigorous generation of caloric by a proper selection of food is not less so. The natural food of this climate (the Arctic) seems well adapted to the purpose. Every one knows that solar caloric, caloric by combustion, and that generated by animal life, are the three chief sources by which our temperature is sustained. Now, it seems but reasonable that in a region where our supply from the two first is so exceedingly limited, the more active evolution from the last source should compensate for the deficiency. It is not so difficult, though certainly far from easy, to explain the laws of heat when exerted on inanimate matter, so as to produce the known vacillations of atmospheric temperature. But to explain these laws as influencing, and influenced by, the laws of vitality—in other words, to show how the affinities of matter are antagonised by the power of vitality (or that we may not lead our readers to suppose there is any want of harmony in the code of laws by which Divine Providence at once governs the animate and inanimate, we will not say antagonised, but nicely balanced); this, indeed, has long puzzled, and will still puzzle, philosophers the most acute. There are, however, some facts upon which we can reason with interest and advantage to future navigators; and we have a theory fairly grounded on those facts, which has now withstood the test of half a century, and which has indeed been modified by the careful process of induction from experiments, but which has never been altogether refuted. To this theory (i. e., *modified as I am about to present it*) I deem it my indispensable duty to direct the attention of any of my medical brethren, who may hereafter chance to visit these regions; for what is notoriously said of air in all parts of the world may here also be especially said of heat, 'we must have it, or we die.'*

"To the physiologist and the general philosopher my remarks, perhaps, appear common-place, and certainly not original; but let him bear in mind that they are recorded only as a means of *directing successors to the importance of this subject*, and to the necessity of directing the *victûs ratio* accordingly. To proceed, then, there are three modes by which heat is probably generated within the body,—First, by the chemical decomposition which takes place in respiration; secondly, by the influence of the brain and nervous system, in some degree, perhaps, analogous to its development by galvanic influence; and, thirdly, *by the process of digestion and nutrition*.

"If it be acknowledged that combustion

* Vide Crawford's Experiments, Spalding on the Diving Bell, and the more recent experiments of Brodie, Philip, and Le Gallois.

goes on more rapidly in cold weather, and that this is wisely preordained, the same remark applies to respiration, in which the imaginative poet and the cold philosopher alike recognise the resemblance. The heat generated will partly depend on the rapidity of the union of the impurities of the blood, and the consequent liberation of caloric.

"*But it will partly depend on the quantity of carbon and hydrogen contained and taken in with the food. On this ground alone I expect the patience of my readers;* for it will follow, *if this be admitted*, that such provisions should be selected for such (northern) expeditions as may have been found to contain these elements in the largest possible excess, loosely combined, and in the most favourable state for elimination. We all know that articles of an opposite chemical constitution lower the temperature, such as nitre, acids, mineral and vegetable; and hence the failure of lime-juice as an antiseptic, unless aided by nutritious food. On reference to the food destined by nature for the support of the Esquimaux, we find it almost exclusively hydrocarbonaceous, oil, blubber, fish, and flesh; the two latter of which cannot be too fat for them. Here we see a strong analogy between the process of nutrition and that of combustion; nearly *the same materials, the same play of affinities, the same results, the same change of latent into sensible caloric.* That persons of a weakly digestion have no great conservative power, with regard to temperature, is a matter beyond doubt; and the converse seems equally manifest. It is here we have to regard the felicity of an Esquimaux constitution; for whatsoever improvement European appetites undergo among them, their inherent digestive powers exceed ours out of all reasonable proportion.

"If I am rightly understood, my readers must see that I contend that the gross diet of northern tribes is not a matter of chance, but in harmony with the slow but constant changes which are continually going on around them, and intended to enable them to resist cold and vigorously to generate heat. Thus, as was witnessed in this expedition, the Esquimaux mother was enabled safely to expose her naked infant, but a few days born, to an atmosphere of 75 degrees below our freezing point, for several minutes; the heat being rapidly generated by the one and as tenaciously retained by the other, for the child during this time was feeding at the breast." Thus wrote Dr. Collier in 1834.

When this paper was sent in to Sir John Ross for publication, Mr. Rymer Jones, who was employed by Sir John to superintend part of the work, doubted the orthodoxy of the third mode of explanation of the source of caloric, and would have expunged it. It was my ill luck first to have the paper inserted by Sir J. Ross without a notice of the editor of it, and now to see reviewers talking of the originality of Liebig's theory of intra-combustion by the process of innutrition eight years afterwards! May I hope Dr. Justus Liebig will see this, and do me justice, since it is the basis of his entire work on Animal Chemistry, aye, and the pillars of the architecture. I remain yours, &c.

G. F. Collier.

Spring-gardens, Aug. 12, 1842.

TREATMENT OF CHOLERA.

To the Editor of The Lancet.

Sir,—I beg to state that in a number of cases of English cholera, some of them so severe as to resemble the Asiatic, I have lately found that rubbing laudanum freely over the stomach and bowels, and administering small repeated doses of sal volatile in water, have effectually checked them. What I have witnessed has so astonished others as well as myself, that I beg you will lose no time in inserting this, as I am sure that the above plan being generally adopted will save many lives. I am, Sir, very respectfully, your obedient servant,

Patrick Gillespie.

Lisson-grove North, Aug. 11, 1842.

MORBID PRODUCTION WITHIN THE SKULL.

COMMUNICATIONS OF MESSRS. SEMPLE AND LANGSTAFF.

To the Editor of The Lancet.

Sir,—In The Lancet of July 9th, Mr. R. H. Semple, of Islington, related a case of cerebral disease, which led him to conclude,

1. That most extensive disease could go on within the skull (yet not interfering with the functions of the important organ which it contains), without producing any symptoms.

2. That this chronic disease could prove a cause of sudden death without any additional lesion.

The description of the morbid parts by Mr. Semple led me at once to conclude that what he had observed was not the result of a morbid growth, a chronic disease, but simply an apoplectic effusion in which a physical change had taken place.

A desire to prevent Mr. Semple's conclusions, in my opinion so ill-founded, from being circulated, without at least being questioned, led me to address a few lines to you, stating the grounds of the opinion which I had formed. For affording them space in your esteemed Journal, I feel deeply indebted; and that I was not altogether wrong in my conclusions, is evidenced by a note from Mr. Langstaff (on whose high authority the original statement was chiefly made), which appears in the last number of The

LANCET. That gentleman commences by saying that he sends "a statement which deviates materially from that made by Mr. Semple." Truth being my only object, I do not wish to criticise the propriety of a difference of statement in reference to a recent pathological fact: solely with a view, therefore, of arriving at correct conclusions, with your permission I will put the statements of both gentlemen in apposition.

Mr. Semple says	Mr. Langstaff says
—"Both the under and upper surfaces [of the diseased portion] were perfectly smooth and polished; one corresponding to the internal surface of the dura mater, the other to the external layer [?] of the arachnoid membrane.	—"On first looking at the specimen it resembled a thickened state of the arachnoid membrane, or a vascular adventitious production.
"The arachnoid membrane was thickened, and inseparably united to the pia mater, which was every where easily detached from the convolutions."	"By careful inspection I detected that the diseased part was composed of two dense layers, with blood in a fluid state between them, which led me to suppose they were portions of the arachnoid coat, and that the effusion of blood caused the sudden death of the patient."

From a review of the whole case, and of the foregoing statements, I am irresistibly led to the following conclusions:—

1. That Mr. Langstaff is *altogether wrong* in supposing this to be either an adventitious growth or a thickened state of the arachnoid membrane. Independently of the impossibility of such a growth taking place without producing any symptoms, the proposition I aim at establishing, we cannot suppose it to take place without blood-vessels entering it, Mr. Langstaff does not in the results of his close examination state such to be the case. Indeed, it is inconsistent with the smooth surfaces described by Mr. Semple. The idea of its being thickened arachnoid, will at once appear unfounded to any one perusing Mr. Semple's statement.

2. That Mr. Semple has no just grounds for his conclusions.

3. As I stated in my note addressed to you that this is a case of sudden death from apoplexy: the effusion of blood taking place between the layers of the arachnoid, in which, on coagulating, the usual separation of lymph and colouring matter has taken place.

4. That it is exceedingly injurious to the advancement of our professional knowledge to circulate, or to allow to circulate without contradiction, inaccurate views or unfounded conclusions; and this is the only apology which I can offer for this prolonged communication, and which, as controversy is not my object, I promise shall be the last from, most obediently yours,

W. K. N.

August 14, 1842.

POST-MORTEM EXAMINATION OF THE DUKE OF ORLEANS.

IN the *Gazette des Hôpitaux*, of July 19th, we find the following account of the post-mortem examination of the late Prince Royal:—

The examination was performed forty hours after decease; the body presented incipient decomposition in the abdominal region and posterior part of the trunk; limbs rigid; traces of a bruise upon the right cheek, and on the right eyebrow and side of the forehead; ecchymosed swelling on the posterior part and right side of the head; traces of bruise on the knees, on the left hand, and on the left hip; marks of numerous leech-bites behind the ears; puncture of the median cephalic vein for blood-letting; marks of the cupping scarificator in various situations upon the trunk and limbs; marks of mustard plasters.

Sanguineous infiltration of the soft parts covering the superior, posterior, and lateral regions of the head—most considerable on the right side and posteriorly.

Disunion of the lambdoidal suture, of the left squamous and additamentum suturæ squamosæ, the sphenoidal, and the two spheno-petrosal sutures.

Numerous fractures, which may be arranged in three series:

1. *Right Side of the Cranium.*—One of these commences at the right crus of the lambdoidal suture, passes a little above the postero-inferior angle of the parietal bone, across the squamous portion of the temporal, into the temporal fossa, and terminates on the great wing of the sphenoid.

2. *Left Side of the Cranium.*—A second proceeding from the left crus of the lambdoidal suture, crosses the middle of the parietal bone, and separates the squamous portion from the rest of the temporal bone; the temporal bone being at the same time displaced at its suture, is retained in its place only by the soft parts.

3. A third fracture traverses the sphenoid transversely across the sella turcica.

The complement of the fractures and disunions here described divides the skull into two halves, one *anterior and superior*, comprehending the upper part of the two parietal bones, the squamous portions of the temporals, the frontal, ethmoid, and nearly the entire of the sphenoid; the other, *posterior and inferior*, comprising the occipital,

the inferior parts of the temporals and parietals, and the posterior part of the sphenoid. This separation permits of a certain degree of movement between the two portions.

The brain is very large, its anterior and inferior portion extending as far back as the fissures of Sylvius, is reduced to a state of reddish pulp as deeply as the bottom of the convolutions. A similar alteration, but of much inferior extent, exists on the right side posteriorly. In the cavity of the arachnoid is a considerable sanguineous effusion. The subarachnoidean tissue is the seat of sanguineous infiltration, and in the ventricles are a few drops of sanguinolent serum. The spinal cord and vertebral column are uninjured.

In the cavities of the pleuræ there is sanguineous effusion. The lungs are gorged with blood, but free from adhesions. The heart and pericardium normal.

The abdominal viscera are perfectly sound.

The injuries to the head, namely, contusion, laceration, rupture, fracture, and disarticulation, are such as are usually produced by the fall of a heavy piece of timber, or large mass of stone, by the passage of the wheel of a heavily-laden waggon over the head, or of an artillery waggon, by the fall of horses upon their riders, and especially by the stroke of a cannon-ball, impinging on the head obliquely. Falls upon the head from a height produce similar effects. But the prince's carriage was low; the impulse given to his body must, therefore, have been immense, for the mere weight of the body falling from this height is wholly insufficient to explain rationally so many fractures and so shattered a condition of the bones. We must suppose that the two forces were so directed as to concentrate their entire impetus upon the head; or, again, we feel constrained to seek for an explanation in supposing an abnormal fragility of the bones, such as was found in the instance of the unfortunate Bennati.

POST-MORTEM EXAMINATION OF A SOLDIER, ONE HUNDRED AND TWO YEARS OLD.

This man had taken part in numerous campaigns, and had never suffered from illness. He retained his bodily powers up to his hundredth year, but gave up from decrepitude and mental incapacity fifteen months previously to his death, and was received into the Military Hospital of Brandenburgh. His death occurred unexpectedly and without premonitory indications.

On examination, thirty-six hours after decease, the body was found moderately stout; the few hairs that remained were silvery; his teeth had long since quitted their sockets, the alveolar processes of the jaws were completely absorbed, and the mouth contracted in size. The opening of the cranium was rendered difficult by the thickness of the bones and their adhesion with the dura mater, and the latter was dense and tendinous. The brain was normal, its arteries converted into bony tubes; the pineal gland was filled with calcareous matter, and the choroid plexuses were vesicular. The larynx and carotids were completely ossified. The thorax large and well formed; lungs perfectly sound; heart normal; valves remarkably ossified; large arteries converted into ossific tubes; costal cartilages almost completely ossified. The liver, spleen, and kidneys presented a state of extreme softening, greater than could be referred to decomposition, and which can alone be explained on the supposition of excessive debility of the vital powers. Thus the kidneys consisted of a semifluid granular mass, although the urine was natural and unclouded. The gall-bladder was distended with upwards of five hundred concretions, of various magnitude, and its coats were so soft that they became ruptured by the slightest touch. No symptoms of this collection had existed during life.—*Medicinische Zeitung*, 1842.

UNIVERSITY OF LONDON.

EXAMINATION OF BACHELORS OF MEDICINE. — FIRST EXAMINATION FOR HONOURS.

August 11 *and* 12.

Chemistry.—Professor DANIELL.

1. What is meant by *specific* and *latent* heat? Explain with reference to examples, and state the general modes of estimating each.

2. What is meant by the polarisation of heat? How may heat be polarised?

3. State Dr. Faraday's theory of electrical induction, and the principal facts upon which it is founded.

4. How is the force conducted in the different parts of a voltaic circuit? and what is the law of its conduction?

5. Having obtained the amount per cent. of carbon, hydrogen, and oxygen in a vegetable substance as follows, C, 42.4, H, 6.5, O, 51.1 = 100, how would you proceed to calculate its composition in equivalents, and how might the result be confirmed?

6. What is the view which must be taken of the monobasic, bibasic, and tribasic phosphates upon the binary theory of salts?

7. What are the principal chemical characters of lithic and phosphatic calculi?

8. What is the constitution of urea? How may it be formed artificially? and how may it be detected in the urine?

Materia Medica and Pharmaceutical Chemistry.—Dr. PEREIRA.

1. Describe the method of obtaining *oil of vitriol*. Explain the theory of the process. How would you detect the presence of lead, nitrous acid, and arsenious acid in oil of vitriol?

2. What are the salts with which commercial bromide of potassium is frequently contaminated, and by what tests can you detect them? What are the characters of pure creosote? By what means would you ascertain whether *ferri potassio-tartras*, Ph. Lond., had been properly prepared?

3. What effect on the gums is produced by the absorption of lead?

4. In what cases are mercury and iodine respectively indicated as resolvents? And what are the circumstances which lead you to prefer the one or the other of these medicines?

5. By what botanical characters would you distinguish *conium maculatum* from *æthusa cynapium*? By what characters is the fruit of *conium maculatum* distinguished from that of *pimpinella anisum*?

6. By what test is the presence of *salicin* in a decoction of willow-bark to be ascertained?

7. What are the effects and uses of *lobelia inflata*? In what form and dose would you administer it?

8. Name the substances respectively numbered 1, 2, 3, 4, 5, 6.

Anatomy and Physiology.—Mr. KIERNAN *and Professor* SHARPEY.

1. Give the dissection required to show the origin, course, and distribution of the occipital artery, describing the several parts exposed in the dissection.

2. Describe the structure, chemical composition, and arrangement of the several textures of the human teeth. Describe also the origin, formation, and mode of eruption of the temporary and permanent teeth.

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1. Describe the dissection required to display the axillary plexus of nerves and its branches, from the external border of the scalenus anticus muscle to the lower border of the axilla, describing the parts successively brought into view in the course of the dissection.

2. Give an account of the structure and mode of growth of the epidermis and epithelium. Describe the intimate structure of elastic tissue, and mention the parts of the human body in which it is found.

THE LANCET.

London, Saturday, August 20, 1842.

AT a late public dinner in Exeter, Chancellor POTT (the son of the celebrated surgeon) adverted to "a correspondence he once "had with the Bishop of SALISBURY, who "was engaged with an infidel opponent, that "claimed the medical body as his allies, "and as the friends of infidel opinions." The Chancellor declared it to be a calumny. We know not who this "infidel" was, but there can be no doubt that his claim to the "medical body as his allies" had no foundation in fact; although it cannot be denied that the bulk of the medical profession had at one time credit for being little better than a band of Atheists. For our own part, we have no hesitation in declaring that in the practical sense medical men are eminently religious, and have rendered the cause of true religion more essential service than any other lay profession.

Without separating the first fundamental principle of religion, "Do justice," from the second, "Love mercy," let us inquire for a moment whether these injunctions are in conformity with the maxims, and are carried out in the practice, of medical men? We refer here not to the ordinary discharge of duties, nor to principles in which the medical profession differs not from any other class of honest men, but to peculiarities by which their conduct is distinguished. It is a law, then, with medical men, to divulge the secrets of their art, and to publish discoveries in the treatment of disease, without any attempt to derive from them any direct pecuniary advantage. The opposite course is consideredfair, and is the usual practice in other arts. Patents are granted, conferring the right of exclusive property in inventions of public utility; and WATT, and ARKWRIGHT, and others, have realised colossal fortunes by improvements in useful machines, without ceasing to be considered honourable men, or even forfeit-

ing their claims, as benefactors, on the public gratitude. If the surgeon should discover a new operation, or instruments for the restoration of some disorder in the human machine,—the replacement of a strangulated bowel, or crushing a stone in the bladder,—he could not consistently with the rule of the profession keep them secret; and if he discovered a remedy of any kind, far from seeking the protection of a patent, or endeavouring to keep its administration in his own hands, he would be bound to explain its nature for the benefit of the world.* "He will gain patients indirectly," it will be said: "People will naturally apply to the discoverer." This is true, to a certain extent; and the same remark may have been submitted to ARKWRIGHT, and other successful patentees, at which those sagacious mechanists would undoubtedly have shaken their wise heads significantly. But it may be urged that "medical men have no temptation to "pursue a different course; they could not "keep the nature of a remedy secret, and "if they did they would obtain neither pa- "tients nor customers?" The history of MORISON's pills is a sufficient answer: the ignorant but crafty quack mixed gamboge with two or three purgatives in the Pharmacopœia, and made pills which he *said* were a cure for every ailment. It is believed that he realised by this "patent medicine" at one time more than 10,000*l.* a-year! If MORISON really realised anything like that sum, by a common drastic purgative, is it not certain that discoverers of new, real, valuable remedies, would realise fortunes by making the ordinary mercantile arrangements?

Mankind evidently ought not to be deprived in sickness of the immediate succour any medical discovery might afford them, which would be the case if its administration were retained in the hands of the discoverer, instead of being placed at the disposal of practitioners in all places and of all times. It is, moreover, the nature of discoveries in medicine that one leads to another, so that the renunciation of secret remedies and nostrums is in every respect for the public advantage. And although medical men have no direct pecuniary interest in their discoveries, we may safely assert, that for zeal in their pursuits—the study of nature, of the human organisation, and of the means of preserving or restoring health—they have not been surpassed by the classes who have been stimulated to exertion by the prospect of rewards and glittering wealth.

BENTHAM contrasted the conduct of medical men in promulgating discoveries (like vaccination), which have a direct tendency to diminish their emoluments, with the conduct of lawyers, who have always resisted any attempt to simplify the law, and to shorten or diminish the expense of litigation. Medical men are, in fact, bound by the public opinion of their own body to take an active part in promoting measures for diminishing sickness, and he would be scouted who suggested a word in favour of the contrary doctrine. If the dead buried in decent cemeteries no longer breathe contagion in our densely-inhabited cities, the sickness will be diminished, and medical men will be deprived of a certain number of fees. The clergy may ask for compensation; and the Bishop of LONDON will, perhaps, procure for the respective rectors a per-centage on every body which is not buried in the churchyards or chancels, and is not allowed to poison their parishioners. But the medical profession can claim no such compensation. They have brought the evil to light. It would be a flagrant violation of the principles which they recognise as a profession, to seek compensation for any pecuniary injury which they may sustain by an improvement in the public health.

The duty of gratuitous professional attendance upon the poor in the emergencies of distress, which there is no legal provision to

* These remarks do not apply to instances in which the discoveries, though made by practitioners of medicine, do not belong to the class "discoveries in medicine."

meet, is generally recognised by medical men. It has been inculcated and practised from the age of HIPPOCRATES. We say nothing here of the dispensaries and hospitals at which the medical officers give gratuitous attendance; nor of the gentlemen who make a great parade about seeing patients gratis; but it is a fact that thousands of poor, industrious men, with large families, or in depressed circumstances, get, without any noise, not only advice, physic, and cordial sympathy from medical practitioners, but in many instances money and food. The doctor enters the dwelling of the poor when there can be no concealment. His eyes see their distress. If the children be seized by a fever, if the mother lie dying, if the intelligent, hardworking, hard-handed father himself be struck by some dangerous accident, which threatens to break up his fair hopes of rearing a family, and the tear of struggling independence, pride, and affection springs up in his eyes—the witness of these emotions cannot withhold his aid. We claim no merit for this. *To give* in such circumstances, is one of the luxuries vouchsafed to our profession; and the feeling of delight in these moments raises us a step beyond what we have hitherto ventured to go—to the great idea of GOD himself. For if the ingenious arguments of PALEY and CHARLES BELL, and others, drawn from design, do give us a glimmering view, the happiness of alleviating the sorrow of a good man raises us to the very footstool of the DIVINITY: for could we feel thus in the presence of a universe unquickened by a Being full of majesty and beneficence?

In the publication of the discoveries of their art—in the sacrifice of their interests—in their efforts to improve the public health, and in the gratuitous dispensation of relief among the poor, we have proofs that the practice of medicine, so far from being adverse to religion, directly implies, or leads to the fundamental principles of Christianity,—"Do justice, love mercy, walk humbly with GOD;" for if we walk with the INFINITE and ETERNAL at all, it must be humbly.

Many passages from the lives and writings of physicians,—from HIPPOCRATES and GALEN to HARVEY and SYDENHAM,—may be adduced in confirmation of these statements. The German critics have thrown discredit on the authenticity of the life of HIPPOCRATES by SORANUS, and his letters, with their many interesting traits and anecdotes. Still the splendour of the character of the Father of Medicine remains; and he won, though it be undecided by uncertain tradition whether he wore, the "golden crown" of Athens. All authorities agree that he was a good man, as well as a great physician. His noble, true, and generous nature is shown better, perhaps, by his writings, than by such traits as the refusal of bribes from ARTAXERXES of Persia, his services in Athens, or the letter to DEMOCRITUS. He conceals nothing in his works. He set the glorious example of giving up the secrets of his art, his family, school, and country, to mankind.

If GALEN had not the simplicity nor grandeur of soul, which shone in HIPPOCRATES, he was not destitute of religion. "He expatiates"—we quote the words of Mr. MOIR, a surgeon, and himself an inspired poet, (DELTA)—"on the beneficence, the benignity, "and wisdom of the ETERNAL BEING, who "created the universe, and delights to linger "over the traces and tokens of his handi-"work, every where gloriously outspread "around him." The following passage may be cited from GALEN's Physiology (De Usu partium, lib. iii.):—"True piety consists "not in immolating hecatombs to the DEITY, "or in burning a thousand delicious per-"fumes to his honour, but in the humble "acknowledgment and lofty proclamation of "his wisdom, his omnipotence, his love, and "his bounty. He has shown his infinite "wisdom in selecting the best means for "accomplishing his beneficent ends; and he "has given proofs of his omnipotence in "creating every thing perfectly conformable "to its destination."

We shall quote one passage from SYDENHAM; not one of the many in which he refers to the DEITY, but a simple expression in a

letter to his friend Dr. BRADY, of the motives by which he was animated in his researches:—"I have always thought it a greater happiness to discover a certain method of "curing even the slightest disease, than to "accumulate the largest fortune; and whoever compasses the former, I esteem not "only happier, but also better and wiser. "For can a person give a stronger proof of "his benevolence and wisdom, than by endeavouring always to promote the public "good, rather than his private interest, as "he makes so small and inconsiderable a "part of the whole? And in reality, as it "is the part of a wicked man to destroy his "fellow-creatures, so it is the duty of a "good man to preserve them, and instruct "others how to save them, from death, even "after his own decease."

A great deal might be said on the tendency of this study of the organisation, to confirm, correct, and extend the views in practical morals, and to increase our knowledge and admiration of the ALMIGHTY MAKER. But we have said enough to prove that medical studies lead directly to the highest principles of true religion. We do not say that they would lead a man to sign and swear by the Thirty-nine Articles—the Athanasian Creed—the Presbyterian Catechism—the Confession of Augsburgh, or the Pope of Rome, or any other Confession, Articles, Pope, or Bishop whatever, about which zealots quarrel: all we contend is, that the study of medicine is the cultivation of the highest and most generous sentiments of human nature.

EPIDEMIC OF TYPHUS IN PARIS.

IT appears from an interesting article in the "Gazette Medicale" (August 6th), that there have been more cases of sickness than usual admitted into the Paris hospitals during the present year. In the first five months 33,045 cases (not 38,175 as is assumed by our contemporary in calculating the mortality) were treated, and 3189 persons died; the deaths in the corresponding months of 1841 were 3087. Small-pox has destroyed great numbers; and patients have more than once contracted this disease in the hospitals from small-pox patients in their vicinity. The writer in the "Gazette" asks if no step can be taken to remedy this evil, or to arrest the ravages of small-pox? The epidemic, he remarks, which has prevailed during two years in England, has completely ceased in London, the registrar-general's report not recording more than four or five deaths a-week from small-pox.

Typhus has prevailed in Paris for the last six weeks or two months with an intensity equal to, if not surpassing, that of the epidemic of 1831. It is not only very common among the poor who go to hospitals, but in the private houses of the middle classes. Several of the wards of the hospitals are crowded. In the ordinary Paris fever the *taches lenticulares* are rarely observed; this year they are of frequent occurrence. The inflammatory type, not very well marked, mingled with biliary and adynamic phenomena, predominates. The cases are said not to be so fatal as usual.

HEALTH OF LONDON.

THE deaths recently registered in the metropolis are slightly above the average. In the *two* weeks ending August 6, the numbers were 882, 890; in the *three* weeks ending July 23, the numbers were 745, 785, 744. The increase has been considerable in *diarrhœa*, *dysentery*, and *cholera*; from which the numbers registered were in the three weeks ending—

	July 16.	Aug. 6.
Diarrhœa	32	76
Dysentery	4	19
Cholera	4	14
	40	109

Children and aged persons have been the greater sufferers, but persons between the ages of 15 and 60 have not escaped. A similar increase in the mortality took place last year in September. At present we see nothing very alarming. The prevailing diseases may be fairly ascribed to the action of the temperature. Typhus fever is not epidemic: at the same time we do not hesitate to say that a

hundred persons are now killed weekly by the filth and open drains in and about London; und unless energetic steps be taken for remedying this state of things, we may anticipate a visitation either of epidemic typhus, influenza, or cholera.

THE INCOME-TAX.

To the Editor of THE LANCET.

SIR,—Having occasion, in carrying on my profession, to use a four-wheel carriage drawn by a pair of horses, and another four-wheel carriage drawn by a pony, I wrote to the commissioners of taxes, at Somerset-house, to inquire whether I should be permitted to deduct these articles in making up my return under schedule D of the present income-tax. In reply to my inquiry I received a letter, of which the following is a copy, made for publication in your excellent Periodical; and I hope as a friend of the profession that you will direct your attention to the subject of the present excessive medical taxation in the ensuing parliamentary session. It appears to me to be most unfair that surgeons and physicians, requiring the use of carriages and horses in the exercise of their profession, should not be allowed to use those articles occasionally for the necessary accommodation of their families, without being subject to the penalty of a property-tax upon them in addition to the assessed taxes, already peculiarly oppressive on that class. I am, Sir, &c.

J. MILMAN COLEY.

Bridgnorth, Aug. 15, 1842.

"Stamps and Taxes, London,
Aug. 11, 1842.

"Sir,—In reply to your letter of the 7th instant, I am directed by the board to inform you, that as your horses and carriages are not solely kept for the purposes of your profession, but are occasionally used by your family, you cannot be allowed, in making your return for assessment under the Property-tax Act, to deduct the expense thereof; neither can you deduct the assessed taxes paid for such horses and carriages. I am, Sir, your obedient servant,

"C. PRESSLEY."

MEDICAL PUBLICATIONS SOCIETY.

To the Editor of THE LANCET.

SIR,—Allow me to suggest that the proposed medical publications society shall not be confined to the publication of standard works of the *old school alone*, but that now and then the copyright of some modern medical or surgical work of first-rate merit be purchased, and that it be published at a lower rate to the members of the society than to purchasers out of the society.

Look at the Art Union, which has worked well, and its object professedly is to encourage *living* artists. In that society every subscriber of one guinea annually receives an impression of an engraving of greater value than the amount of subscription, and has the chance of gaining valuable modern paintings in a kind of lottery held every year. Why should not living writers on medicine and surgery be similarly encouraged? I believe that if the members of the profession generally were induced to expect that a well-organised society of the kind would secure to them annually more than their subscription's worth of some valuable production, ancient or *modern*, the society would consist of double the number anticipated by Dr. Branson. What facilities would be afforded by an extensive society of this kind for the publication of splendid anatomical, obstetric, or pathological illustrations.

I would merely throw out these hints to the members of the profession, at the present time engaged in forming their plans for the organisation of a society, and to the medical book publishers of the metropolis, whose business-tact will enable them to see the practicability of the scheme in a clearer light than medical men, wishing that, by the combination of the two, we may have an extensive and prosperous society, a society calculated to benefit the profession generally, and enhance the medical literature of our country. By giving this note an early insertion, you will oblige, Sir, your obedient servant,

T. HERBERT BARKER.

Bedford, Aug. 16, 1842.

MR. GARLIKE'S STATEMENTS.

To the Editor of THE LANCET.

SIR,—I much regret feeling obliged to ask your opinion of the case you were kind enough to insert in THE LANCET of July 16th, page 541, Mr. Spencer Pidcock not having ventured a reply to the allegations made in the case in question. I am, Sir, yours obediently,

T. W. GARLIKE.

Rickmansworth, Aug. 15, 1842.

*** We are always very reluctant to express opinions, or pronounce a judgment, on cases which rest in dispute between private practitioners. In the present instance, without offering any remarks on the conduct of Mr. Pidcock, we have no hesitation in saying that it appears to us that Mr. Garlike's treatment of his patient was strictly correct, and that his behaviour to his brother practitioner appears to us to have been in all respects unexceptionable.—ED. L.

UNIVERSITY COLLEGE HOSPITAL.

PERITONITIS FROM PERFORATION OF THE APPENDIX VERMIFORMIS.

THOMAS KENNELL, aged 18, was admitted Tuesday, June 21, 1842, under the care of Dr. Taylor. He is of the ordinary conformation and florid complexion; he is a shoemaker, and single: always had enough to eat, always lived regularly and temperately; never been intoxicated; resides in a dry but confined situation; parents dead, does not know of what they died. He generally enjoys good health, and thinks he has an excellent constitution. About eight years ago, he states that he had inflammation of the left chest, accompanied with pleurisy. He does not recollect coughing or spitting at the time; he had shortness of breath, severe sharp pain below the ribs, and not above the margin of the lower ribs. He was bled, leeched, and blistered; has had no complaint since. The present attack commenced on Sunday, June 19, at three, a.m., suddenly, with severe, sharp pain all over the abdomen, with sickness, vomiting, and some diarrhœa; no rigor or feverishness preceded the pain, which has continued to increase until the present time; it is constant and unremitting, but increased at times, and upon motion taking a deep breath, and upon pressure, but not by pinching; it extends all over the abdomen, but is worse on the right side of it and in the hypogastrium; the sickness and vomiting are much better than they were at first; the matter vomited is of a deep green colour. He has shortness of breath on account of the pain in the abdomen; his breathing is entirely costal. His bowels have not been open since Friday until this morning, when they were opened freely; the motion was of a white colour, and very watery. Yesterday he took ninepenny-worth of castor-oil, four doses of a mixture, a powder and two pills, and applied sixteen leeches to the abdomen last night. The leeches did not afford him any relief. Tongue moist, covered with a light, brown fur; papillæ at the apex more distinct than usual; great thirst; skin hot; countenance flushed, but very little anxious; pulse 116, full, moderately firm, and rather jerking; urine scanty, high-coloured, when passing it causes pain in the abdomen. He lies on his back with his knees drawn up. The abdomen seems moderately distended, and yields a tympanitic sound on slight percussion; heart's impulse a little strong, no murmurs. He has not eaten or drank anything but his usual diet, and has followed his employment as usual. He was ordered to be bled to eighteen ounces, to have three grains of calomel every three hours, and to have the abdomen fomented with turpentine.

June 22. Dr. Quain saw him at eight yesterday evening, when he felt somewhat better. He was ordered an injection, consisting of two ounces of starch with forty drops of tincture of opium; this gave him great pain. His bowels were opened several times before the injection, but have not been since. Dr. Quain saw him again at six this morning: his pulse was 160; abdomen more full, and felt doughy and firm. Ordered beef tea. He did not sleep above ten minutes in the night; he felt more pain during the night than previously, and was very feverish. This morning, at ten, he has not much pain: still lies on his back, with his legs drawn up; somewhat restless; countenance anxious; great thirst; vomits frequently a matter of a brown colour, having no odour; extremities cold; general surface of body cadaverous. Died at twenty minutes to twelve to-day.

After-death Appearances.

The body was examined twenty-four hours after death. Abdomen much distended, and tympanitic. On cutting into the peritoneum some turbid, fœtid serum escaped; there was pus mixed with the serum. The peritoneum redder on the right side than the left. The serum in the neighbourhood of the gall-bladder yellow. Intestines matted together by recent adhesion, and much distended. The peritoneum adherent to the gall-bladder. The redness ceases where the intestines are agglutinated, but passes over; mesentery much thickened and softened; stomach marbled at the pyloric orifice with black colouring matter, much reddened at the cul de sac; mucous membrane not softened. In the large intestines the solitary glands are very distinct and elevated; but in the small intestines, they and Peyer's glands were scarcely visible. The vermiform appendix dark coloured, with thickened coats. Two perforations with rounded edges were seen. Mucous membrane throughout inflamed, and riddled with ulcerations; the exterior was also much inflamed. A gritty brown substance, about the size of a bean, was found in it. On a section a nucleus was found, the matter surrounding the nucleus appeared to be fæcal.

Chest.—The whole of the left lung was found adherent to the walls of the chest by firm old adhesions; about two ounces of bloody serum in the right chest; right lung, of a deep red colour, crepitates freely, very lacerable at the back part; pleura of the left lung adherent to the pericardium. The whole of the left lung smaller and firmer than usual, crepitates less than the right; lower lobe lacerable; pericardium loosely adherent to the heart by old adhesions. Heart covered with much fat; surface redder than usual; firm coagulum, partly fibrinous, in the right auricle and ventricle. Cavity of the left ventricle natural in size; endocardium thickened and opake; walls darker coloured than usual, and fully as thick; mitral valve admits two fingers. Walls of

the right ventricle thicker than usual; endocardium thick and opake. Nothing unusual was observed in other organs.

RHINOPLASTIC OPERATION.

John Jarmey, a healthy-looking youth, eighteen years of age, was admitted into the hospital, under the care of Mr. Liston, May 18th, for the purpose of having a new nose made, he having lost the former one. He states that about four years ago his nose was broken by the kick of a horse; at the same time, from his account, he must have received concussion of the brain, but soon recovered from it; and two of the incisor teeth of the upper jaw were also knocked out. About twelve months after the accident abscesses began to form about the nose, and were followed by exfoliation of portions of the right superior maxillary bone, and loss of the remaining superior incisors. Piece by piece, in the course of two years, the ossa nasi and turbinated bones followed; the alæ and cartilages being also destroyed by ulceration. At about the end of the two years the soft parts cicatrised, and there has been since no further exfoliation of bone.

In his present state, therefore, all the external parts of the nose are gone, together with much of the internal structure. The sense of smelling is completely destroyed: there is also an ugly distortion of the mouth towards the right side, from contraction of cicatrices. Ulceration, as far as can be judged by sight, has entirely ceased; but he says there is occasionally a fœtid discharge from the "cavern," that remains in place of the lost member. The youth being in perfect health, Mr. Liston determined on operating without much delay.

May 20. The operation was commenced by cutting a groove in the integuments on each side of the cavity, about two lines in width, to receive the edges of the flap, which was to form the new organ. A piece of soft leather, of the size and form required for the flap, being laid on the forehead, a corresponding portion of integument was cut through and dissected up, being left adherent only by a long, narrow pedicle, towards the root of the nose (this portion is dissected up as deeply as possible, without denuding the subjacent bone, to ensure the nutrition of the flap). The flap being thus raised was allowed to hang down until hæmorrhage ceased, after which it was twisted round, and laid down, and its borders, accurately adapted to the grooves prepared for them, were fixed by four or five points of interrupted suture. Dossils of lint being then placed under the attached flap, it presented the appearance of a very "seemly nose." No kind of dressing was applied to secure coaptation of the flap to the grooves, in addition to the sutures.

21. He seems to be going on well; the new nose maintains a good temperature.

23. Some of the sutures were removed; progress favourable.

24. The remaining sutures were removed; the dossils of lint were also removed from within the cavity, and replaced by fresh; suppuration is going on in the under surface of the new member, which is adherent almost entirely by the first intention; a few strips of isinglass-plaster were now applied to secure a just coaptation; the wound in the forehead is commencing to granulate, and is dressed with water-dressing.

June 7. The progress of the case has been in every way satisfactory, the new organ looking rather thick and œdematous; to remove this condition a sort of "saddle" was made, to be placed over the nose, and secured behind the head by tapes. This instrument, which is made of a pretty good shape for a nose, is supplied with a screw and spring, by which it may be dilated, or made to contract, and exercise a pressure on the organ. The apparatus was worn throughout the greater part of the patient's stay in the hospital, being removed occasionally, as it tended to produce ulceration; of the cicatrix, by which the new organ is united to the face.

28. On this day, the wound in the forehead being cicatrised, the attachment of the flap to the forehead was divided, and a groove being made for it in the integument, it was laid down, and fixed with a point of suture. No dressings were applied in this instance, the blood being allowed to coagulate about the wound, and keep the edges together, as in the operation for hare-lip. Adhesion soon took place; the cavity of the nose got nearly filled up by the granulation from the under surface of the flap, and required daily a smaller dossil of lint to be introduced. The young man has continued throughout in good health—has had a good meat diet, without any beer, or other liquor.

July 1. Every part is now firmly united; the nose is getting solid and substantial, and able to support itself, and the wound of the forehead cicatrised. In consequence of the narrowness of the upper lip it was not considered advisable to make a new columna, as might otherwise have been done.

21. He left the hospital this day, much satisfied with his improved personal appearance, and with a nose indeed, if not of a true Grecian or Roman caste, yet still very respectable, and one that will do very well in the world.

QUADRUPLE BIRTH.

A WOMAN was lately delivered, at Ghent, of four children: one died as soon as born; the others, together with the mother, are in the best possible health.

ROYAL COLLEGE OF SURGEONS IN LONDON.

List of gentlemen admitted members on Friday, August 12, 1842:—E. Wardley, G. Adams, W. P. Stiff, A. Lloyd, T. Martin, W. Skelding, F. Anderson, C. Miller, R. Irwin, J. Jennings, A. Furlong, J. Hewitt. Admitted Monday, August 15, C. Juckes, R. C. Russell, J. Richardson, W. O. Barker, T. W. Challinor, J. Briscoe, T. Taylor, F. J. M. Mosgrove, W. A. Sumner, G. Cronyn, J. B. Fletcher, W. A. James, R. Wilson, R. W. Moore.

BOOKS RECEIVED.

The Pharmaceutical Journal and Transactions, to July, 1842. London: Churchill.

Sanatorium. Abstract of Proceedings at a Public Meeting to Commemorate its Opening, May 28, 1842. Pp. 32.

Commentaries on some Doctrines of a Dangerous Tendency in Medicine, and on the General Principles of Safe Practice. By Sir Alexander Crichton, M.D., F.R.S., L.S. and G.S. London: Churchill. 1842. 8vo. Pp. 283.

A Practical Treatise on the Scalp. By John E. Erichsen, M.R.C.S.L., &c., and formerly House-surgeon to University College Hospital. London: Churchill. 1842. 8vo. Coloured Plates. Pp. 192.

TO CORRESPONDENTS.

W. J. B.—Unless the party can complete his medical curriculum according to the established regulations, he cannot become, nor legally act as, a member of the profession, and had better abandon the calling at once; but first it might be advisable to make a candid representation of the circumstances to the authorities at the hall, with a view to ascertaining whether the difficulty of the unfinished apprenticeship could not, by an act of favour, be surmounted.

Mr. H. Brookes, of 57, Poland-street, has favoured us with a letter, in which he denies that Mr. Rumball, whose communication was noticed at p. 671 of The Lancet, Aug. 6, did "expose" (as deceptions) any mesmeric proceedings "at the lecture at Birmingham in March last, in which Mr. Brookes exhibited his experiments on the phrenological organs of a lucid sleep-walker." Mr. Brookes asserts that Mr. Rumball "exposed nothing but himself." Mr. Brookes adds, "that although Mr. R. did not confess his belief of the phrenological phenomena, he certainly made something like a confession of his faith in mesmerism, and actually submitted himself to the operation, and publicly admitted before an assembly of three hundred persons that he was influenced—that his pulse and respiration were considerably accelerated, and that he experienced a sensation of sickness,—rather curious admissions by a sturdy *opposer* and *exposer* of the fallacies of mesmerism." Moreover, this same Mr. R., at the close of the proceedings, proposed a vote of thanks to Mr. Brookes for the courteous and honourable manner in which he had conducted the experiments," and in the *Birmingham Herald* afterwards stated that "even Mr. Brookes, annoyed as he must have been, behaved with candour and good faith." As Mr. Brookes may be desirous that a certain falsity should not be omitted from our notice of his letter, we add the concluding passage of that document:—"For myself," he says, "so long as I am under the protection of truth, I can well afford to treat such insidious attacks with the contempt they merit, but when a public journal so eagerly and characteristically gives them currency in its own pages, for the evident purpose of bolstering up its own inveterate personal attacks on other parties, it becomes necessary to afford the profession the means of judging of both the journal and its correspondents."—Who those "other parties" may be we are perfectly ignorant, our hostility lies against *the fraud*, not against the *defrauded*. As regards Mr. Brookes, we certainly never read, or knew his name or address until they were thus accidentally introduced to our notice.

A Practitioner, dating his letter, "Brentford Union," Aug. 12, says, that he has just heard it asserted that a medical practitioner in that union has been appointed one of the income-tax commissioners. He adds, "If this be true, it will prove very annoying to the other practitioners to have their affairs made patent to a fellow-practitioner, whether he be a thorough gentleman or an illiterate and coarse-minded man. There is not a practitioner in the union who does not know as well as I do that such an office as that of commissioner might be made unpleasant to their feelings, even if vested in the hands of one whose education had made him a gentleman, or whose right to enrol his name among properly-constituted practitioners had been certified by an examination. Black clothes and a white neckcloth do not constitute the former, any more than a large brass plate with 'surgeon' on it proves the latter. The sooner a vexatious matter like this is noticed the better; and it is on this account that I hope that this note will be inserted."

Beppo may as well be content without the meal. He cannot "eat his cake and have it too."

Indiscretion.—Try a tourniquet.

Dr. Thorburne's advertisement has arrived, but we see not in what respect it differs from the advertisements of any other quack.

Showing the No. of Deaths from all Causes, Registered in the 5 Weeks, ending Saturday, Aug. 6, 1842.

Causes of Death.	July 3 to 9	July 10 to 16	August 17 to 23	August 24 to 30	August 31 to A. 6	Weekly Av. 1838-41, (corrected.)
Small-Pox	8	6	9	16	6	32
Measles	29	39	27	18	32	23
Scarlatina	29	25	23	28	31	32
Hooping-Cough	21	17	9	18	18	31
Croup	10	3	7	7	8	7
Thrush	5	13	7	10	13	5
Diarrhœa	13	12	12	24	40	8
Dysentery	....	2	5	6	8	2
Cholera	....	1	3	2	9	1
Influenza	2	1	2	1	1	2
Typhus	17	25	15	24	30	49
Erysipelas	3	5	3	4	2	6
Syphilis	....	....	....	1	....	.5
Hydrophobia	1	....	....	1	....	.1
TOTAL	138	139	122	160	198	190
Cephalitis	14	15	22	12	8	11
Hydrocephalus	35	35	45	47	35	34
Apoplexy	19	13	16	18	9	17
Paralysis	7	14	14	16	17	15
Convulsions	54	61	56	57	64	59
Epilepsy	4	4	2	3	3	4
Insanity	....	1	1	1	1	1
Delirium Tremens	3	2	2	2	1	1
Dis. of Brain, &c.	9	12	8	6	11	7
TOTAL	136	157	166	162	147	149
Quinsey	2	1	....	1	1	1
Bronchitis	5	6	4	6	7	10
Pleurisy	3	....	....	1	....	2
Pneumonia	53	34	41	40	53	72
Hydrothorax	4	....	....	4	1	3
Asthma	5	8	7	6	5	23
Consumption	132	146	150	156	141	141
Dis. of Lungs, &c.	14	11	11	13	12	12
TOTAL	218	206	213	227	220	268
Pericarditis	....	....	1	....	1	.6
Aneurism	1	....	....	....	....	.6
Dis. of Heart, &c.	19	14	12	15	19	17
TOTAL	20	14	13	15	20	18
Teething	15	18	18	21	23	17
Gastri—Enteritis	31	27	34	36	37	18
Peritonitis	....	....	....	2	2	1
Tabes Mesenterica	5	6	2	6	8	4
Ascites	....	1	....	....	1	.5
Ulceration	....	....	2	1	2	1
Hernia	2	1	1	1	1	2
Colic or Ileus	1	4	0	2	2	2
Dis. of Stomach	5	1	5	8	1	5
Hepatitis	1	3	2	....	1	1
Jaundice	4	....	3	2	....	2
Dis. of Liver, &c.	6	8	7	9	10	8
TOTAL	70	69	80	88	88	61
Nephritis	....	....	1	....	....	.4
Diabetes	....	....	....	....	1	.3
Stone	1	2	1	1	....	.4
Stricture	1	....	....	....	....	.3
Dis. Kidneys, &c.	1	1	2	6	6	2
TOTAL	3	3	4	7	7	4

Causes of Death.	July 3 to 9	July 10 to 16	August 17 to 23	August 24 to 30	August 31 to A. 6	Weekly Av. 1838-41, (corrected.)
Childbed	4	3	7	6	4	7
Ovarian Dropsy	1	....	....	2	....	.3
Dis. of Uterus, &c.	1	3	1	....	1	2
TOTAL	6	6	8	8	5	10
Rheumatism	2	3	2	....	4	3
Dis. of Joints, &c.	....	4	1	6	....	3
TOTAL	2	7	3	6	4	6
Ulcer	....	....	1	....	....	.4
Fistula	....	1	....	....	....	.3
Dis. of Skin, &c.	....	....	....	....	3	.3
TOTAL	....	1	1	....	3	1
Inflammation	6	4	3	6	5	10
Hæmorrhage	7	....	2	4	1	3
Dropsy	23	30	23	28	37	34
Abscess	3	1	....	5	2	4
Mortification	6	1	1	1	3	4
Scrofula	1	2	1	1	3	2
Carcinoma	5	8	9	14	9	7
Tumour	1	1	....	3	2	2
Gout	....	2	....	1	2	1
Atrophy	7	16	6	13	10	5
Debility	13	20	19	24	30	17
Malformations	....	2	....	....	....	1
Sudden Deaths	14	18	6	23	10	14
TOTAL	86	114	70	123	114	104
Old Age	34	51	43	56	56	69
Intemperance	....	....	....	....	1	.6
Privation	....	....	....	1	....	.5
Violent Deaths	32	18	19	22	25	24
TOTAL	32	18	19	23	26	25
Causes not Spec.	....	....	2	7	2	7
Deaths, all Causes	745	785	744	882	890	912
No. of Week	27	28	29	30	31	....

1841—42.	Ages. 0 to 15	15 to 60	60 & upwards
July 3rd to 9th	385	236	103
10th to 16th	401	250	134
17th to 23rd	399	225	120
24th to 30th	428	285	168
31st to August 6th	470	260	160
Weekly Average, 1838—41	433	312	165

TEMPERATURE	High.	Low.	D. Mean.
Week ending July 9	79°	52°	64°
,, 16	83	53	66
,, 23	78	53	65
,, 30	80	50	63
,, August 6	82	55	66

	Enumerated Pop. 1841.	July 3 to 9.	July 10 to 16.	July 17 to 23.	July 24 to 30.	July 30 to August 6.	Weekly Av 1838-41
West Districts	300,705	110	120	104	136	130	135
North Districts	365,660	156	117	144	175	197	162
Central Districts	373,806	134	154	157	181	165	188
East Districts	392,496	162	179	164	189	225	206
South Districts	438,060	183	215	175	201	173	221
	1,870,727	745	785	744	882	890	912